University of Toronto

School of Graduate Studies 2005/2006 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; assists graduate units in their efforts to provide career opportunities for graduates; 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.

Finally, SGS is involved directly in the oversight of teaching and research as well as having operational responsibility for interdisciplinary and interdivisional centres and institutes.

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 calendar to learn more about the excellent programs we offer.

Here at the largest graduate school in Canada, about 12,000 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 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 our Web site: www.sgs.utoronto.ca. This site is also a gateway to the fields of study that you may choose. Then contact the graduate unit in which you are interested for more information.

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

About this Calendar

The *School of Graduate Studies Calendar* is published annually in July. A subset of its material is contained in a slimmer volume known as the *School of Graduate Studies Handbook,* which is distributed to registered students.

The complete calendar is posted on the SGS Web site at www.sgs.utoronto.ca. Printed copies of the calendar 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.

CALENDAR

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 eight sections. The term "graduate unit" refers to a department, centre, or institute.

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.

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 schedules, types of fees, and fees for graduate student categories are explained.

Section 4
Financial Support and Exchange Programs describes awards, fellowships, and bursaries available to graduate students. They are organized by granting category. The section concludes with a Web page pointer to student exchange programs.

Section 5
General Information outlines University services available to enhance graduate life at U of T. Look for student housing information in this section.

Section 6
Course Codes, established by the graduate units to identify their courses, are listed in this section. Joint course designators beginning with the letter "J" identify courses shared by two or more units.

Section 7
Graduate 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 departmental entries in section 8.

Section 8
Graduate Programs. The largest component of the calendar features a comprehensive list of programs offered by the University's graduate units. Each entry contains valuable information about admission and program requirements as well as courses of instruction. Faculty appointed to the graduate unit are listed by category. For additional details about a graduate program, visit the unit's Web site and/or consult the department's handbook.

HANDBOOK

The *School of Graduate Studies Handbook* is published annually for distribution to registered graduate students. The Handbook is a subset of the *School of Graduate Studies Calendar* and contains the complete contents of the calendar except for Section 8, Graduate Programs.

Students can access Section 8 on the SGS Web site at www.sgs.utoronto.ca where the complete calendar is posted. Each program entry contains a direct link to the graduate unit's Web site where more details are available. Some departments publish graduate handbooks which are another source of valuable information.

Important Notices

Changes in programs of study and/or courses

The 2005/2006 School of Graduate Studies Calendar is effective for the academic period September 1, 2005 to August 31, 2006. References in the calendar to current academic year refer to this period.

The programs of study described by the calendar are available for the years to which the calendar applies. 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 reasonably 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, the courses necessary to complete the minimum requirements of the program will be made available annually. However, we 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

The University has several policies that are approved by the Governing Council and which apply to all students. Visit http://www.utoronto.ca/govcncl/pap/alphapol.htm for an alphabetical list of policies. Each student must become familiar with the policies that apply. The University will assume that the student has done so. The rules and regulations of the School are displayed here. Applicable University policies are either fully or partially displayed here or listed here.

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 here, as amended from time to time.

Enrolment limitations

The University makes every reasonable effort to plan and control enrolment to ensure that all 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 can reasonably be made available while at the same time maintaining the quality of instruction. In such cases, the University reserves 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. Notice and alternative instruction will be given. The University will not be liable for any loss, damages, or other expenses that such limitations or withdrawals might cause.

Copyright in instructional settings

A student wishing to tape-record, photograph, video-record or otherwise reproduce lecture presentations, course notes or similar materials provided by instructors 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 I.D. (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 I.D. numbers. The University assumes and expects that students will protect the confidentiality of their Person I.D. number.

Fees

The University reserves the right to alter the fees and other charges described in this publication.

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Academic Calendar 2005/2006

2005

M	August	1	Civic Holiday
T	August	2	Registration for September Session begins
W	August	31	Last date for payment of tuition fees to meet registration deadline
M	September	5	Labour Day
M	September	12	Most formal graduate courses and seminars begin in the week of September 12 (1)
W	September	15	Final date to submit final Ph.D. theses to SGS to avoid fee charges for 2005/2006
F	September	16	Registration for September Session ends; after this date, a late registration fee will be assessed
F	September	16	Course work must be completed and grades submitted for Summer Session courses and extended coursed (2)
W	September	21	Summer Session grades available for viewing by students on the Student Web Service
F	September	30	Final date for receipt of degree recommendations and submission of any required theses for master's degrees for Fall Convocation (3)
F	September	30	Final date to submit final Ph.D. thesis for Fall Convocation
F	September	30	Final date to add full-year and September Session courses (4)
M	October	10	Thanksgiving Day
F	November	4	Final date to drop September Session full or half courses without academic penalty
	November	TBA	Fall Convocation
	December		For last day of classes before Winter break, consult graduate units concerned

2006

F	January	6	Final date for registration of students beginning program in January Session; after this date, a late registration fee will be assessed
M	January	9	Most formal graduate courses and seminars begin in the week of January 9th (1)
F	January	13	Course work must be completed and grades submitted for September Session courses (2)
M	January	16	Final date to submit final Ph.D. theses without fee payment for January Session
W	January	18	September Session grades available for viewing by students on the Student Web Service
F	January	27	Final date to add January Session courses (4)
F	January	27	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	27	Final date for all students to request that their degrees be conferred in absentia in March

F	January	27	September dual registrants must be recommended for the master's degree by this date to maintain their Ph.D. registration (3)
F	March	3	Final date to drop full-year or January Session courses without academic penalty(4)
	March	TBA	March Graduation in absentia
F	April	14	Good Friday
F	April	28	For students obtaining degrees at June Convocation, course work must be completed and grades submitted for full-year and January Session courses
F	April	28	Final date for receipt of degree recommendations and submission of any required theses for master's degrees for June Convocation(3)
F	April	28	Final date for submission of final Ph.D. thesis for students whose degrees are to be conferred at the June Convocation
F	April	28	Final date for degree recommendations of January dual registrants for the master's degree to maintain their Ph.D. registration (3)
	May		For first day of summer classes, consult graduate unit concerned.
F	May	5	Final date for registration for May Session
F	May	12	Final date to enrol in May-June or May-August Session courses
F	May	19	Course work must be completed and grades submitted for full-year and January Session courses (except for extended courses) (2)
M	May	22	Victoria Day
W	May	24	January Session grades available for viewing by students on the Student Web Service
	June	TBA	Spring Convocation
	June	TBA	Spring Convocation
F	June	2	Final date to drop May/June F section courses without academic penalty
F	June	30	Final date for registration for July-August courses
F	June	30	Final date to drop May-August Session Y section courses without academic penalty
M	July	3	Canada Day Holiday
F	July	28	Final date to drop July-August S section courses without academic penalty
F	July	28	Course work must be completed and grades submitted for May/June F section courses[2]

(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 1.5 hours before sunset on Monday, October 3 to about 1.5 hours after sunset on Wednesday, October 5) or on Yom Kippur (from about 1.5 hours before sunset on Wednesday, October 12 to about 1.5 hours after sunset on Thursday, October 13).

(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. Course changes for part-time special students require an earlier deadline.

Officers

OFFICERS OF THE UNIVERSITY

A complete list of current University of Toronto officials is available at:
www.utoronto.ca/govcncl/gc/3.01.07.pdf

OFFICERS OF THE SCHOOL OF GRADUATE STUDIES

Dean
S. Pfeiffer, BA, MA, PhD

Vice-Dean
TBA

Associate Dean, Division I - Humanities
E. A. Cowper, BA, AM, PhD

Associate Dean, Division II - Social Sciences
S. S. Acker, BA, MA, PhD

Associate Dean, Division III - Physical Sciences
F. G. Ferris, Bsc, PhD

Associate Dean, Division IV - Life Sciences
TBA

Divisional Structure

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

Division I - The Humanities

Ancient and Medieval Philosophy (CP)
Ancient Greek and Roman History (Joint CP)
Ancient Studies (CP)
Book History and Print Culture (CP)
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
History of Art
Jewish Studies (CP)
Italian Studies
Linguistics
Medieval Studies
Museum Studies
Music
Near and Middle Eastern Civilizations
Philosophy
Religion, Study of
Semiotics (CP)
Slavic Languages and Literatures
South Asian Studies (CP)
Spanish
Women's 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)
Economics
Ethnic and Pluralism Studies (CP)
Geography
Human Development and Applied Psychology
Industrial Relations and Human Resources
Information Studies
International Relations (CP)
International Studies
Law
Management
Management and Economics (CP)
Planning
Policy Analysis
Political Science
Russian and East European Studies
Social Work
Sociology
Sociology and Equity Studies in Education
Theory and Policy Studies in Education
Urban and Community Studies

(CP) Collaborative Program

Division III - The Physical Sciences

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

Division IV - The Life Sciences

Addiction Studies (CP)
Aging and the Life Course (CP)
Biochemistry
Bioethics (CP)
Biomedical Communications
Biomolecular Structure (CP)
Biotechnology
Botany
Cardiovascular Sciences (CP)
Dentistry
Developmental Biology (CP)
Doctor of Medicine/Doctor of Philosophy
Exercise Sciences
Forestry
Health Care, Technology, and Place (CP)
Health Policy, Management and Evaluation
Health Services and Policy Research (CP)
Immunology
Laboratory Medicine and Pathobiology
Life Course and Aging
Medical Biophysics
Medical Science
Molecular and Medical Genetics
Neuroscience (CP)
Nursing Science
Nutritional Sciences
Occupational Therapy
Pharmaceutical Sciences
Pharmacology
Physical Therapy
Physiology
Proteomics and Bioinformatics (CP)
Psychology
Public Health Sciences
Rehabilitation Science
Speech-Language Pathology
Toxicology, Biomedical (CP)
Zoology

(CP) Collaborative Program

Degree Programs

Addiction Studies (CP)	M.A. M.H.Sc. M.I.St. M.Sc. M.S.W.	Ph.D.
Adult Education and Counselling Psychology	M.A.+ M.Ed.+	Ed.D.^ Ph.D. Ph.D.[1]
Aerospace Science and Engineering	M.A.Sc. M.Eng.+	Ph.D.
Aging and the Life Course (CP)	M.A. M.H.Sc. M.I.St. M.Sc. M.S.W.	Ph.D
Ancient and Medieval Philosophy (CP)		Ph.D.
Ancient and Greek and Roman History (CP)		Ph.D.
Ancient Studies (CP)	M.A.	Ph.D.
Anthropology	M.A.+ M.Sc.+	Ph.D.
Architecture, Landscape, and Design	M.Arch.+ M.L.A.+ M.U.D.+	
Asia-Pacific Studies (CP)	M.A.	
Astronomy and Astrophysics	M.Sc.+	Ph.D.
Astrophysics (CP)	M.Sc.	
Biochemistry	M.Sc.	Ph.D.
Bioethics	M.H.Sc.	
Bioethics (CP)	LL.M. M.A. M.H.Sc. M.Sc.	Ph.D. S.J.D.
Biomedical Communications	M.Sc.BMC	
Biomedical Engineering	M.A.Sc. M.H.Sc.	Ph.D.
Biomedical Engineering (CP)	M.A.Sc. M.Sc.	Ph.D.
Biomolecular Structure (CP)		Ph.D.
Biotechnology	M.Biotech.	
Book History and Print Culture (CP)	M.A.	Ph.D.
Botany	M.Sc.	Ph.D.
Cardiovascular Sciences (CP)	M.Sc.	Ph.D.
Chemical Engineering and Applied Chemistry	M.A.Sc. M.Eng.+	Ph.D.
Chemistry	M.Sc.	Ph.D.
Civil Engineering	M.A.Sc. M.Eng.+	Ph.D.
Classics	M.A.+	Ph.D.
Community Development (CP)	M.A. M.Ed. M.H.Sc. MSc.PI. + M.S.W.	
Comparative, International and Development Education (CP)	M.A. M.Ed.	Ed.D. Ph.D.
Cornparative Literature	M.A.+	Ph.D.
Computer Science	M.Sc.+	Ph.D.
Criminology	J.D./M.A. M.A.+	Ph.D.
Curriculum, Teaching and Learning	M.A.+ M.Ed.+ M.T.	Ed.D.A Ph.D. Ph.D.[1]
Dentistry	M.Sc.+	Ph.D. Ph.D.[1]
Design and Manufacturing, Advanced	M.Eng.D.M.+	
Developmental Biology (CP)		Ph.D.
Developmental Science (CP)	M.A.	Ph.D.

(CP) Collaborative Programs are offered by two or more graduate units using the teaching and facilities of the collaborating units. The student must be admitted to, and enrol in, one of the collaborating units, but may design his or her program from courses and research offered in the collaborating units.

+Part-time studies program is available. Consult the graduate unit for details.

^AI Ed.D. programs have a full-time component. Consult the graduate unit for details.

[1]Flexible delivery. This model appeals to candidates who are able to combine work experience with graduate training.

Doctor of Medicine/ Doctor of Philosophy		M.D./Ph.D.
Drama	M.A.+	Ph.D.
East Asian Studies	M.A.+	Ph.D.
Economics	J.D./M.A. M.A.+	J.D./Ph.D. Ph.D.
Editing Medieval Texts (CP)		Ph.D.
Electrical and Computer Engineering	M.A.Sc. M.Eng.+ M.Eng.Tel.+	Ph.D.
English	M.A.+	Ph.D.
Environment and Health (CP)	M.A. M.H.Sc. M.Sc. M.Sc.BMC	Ph.D.
Environmental Engineering (CP)	M.A.Sc. M.Eng.	Ph.D.
Environmental Studies (CP)	M.A. M.Env.Sc. M.Sc. M.Sc.F.	Ph.D.
Ethnic and Pluralism Studies (CP)	M.A. M.N. M.Sc. M.S.W.	Ph.D.
Exercise Sciences	M.Sc.+	Ph.D. Ph.D.'
Financial Economics	M.F.E.	
Forestry	M.F.C. M.I.T.F.P. M.Sc.F.	Ph.D.
French Language and Literature	M.A.+	Ph.D.
Geography	M.A.+ M.Sc.+ M.S.A.+	Ph.D.
Geology	M.A.Sc. M.Sc.+	Ph.D.
Geology and Physics (CP)	M.Sc.	Ph.D.
Germanic Languages and Literatures	M.A.+	Ph.D.
Health Care, Technology and Place (CP)		Ph.D.
Health Policy, Management and Evaluation	M.H.Sc. M.Sc.+ M.H.Sc/.M.S.W.	Ph.D. Ph.D.'
Health Services and Policy Research (CP)	M.Sc.	Ph.D.
History	MA.+	Ph.D.
History and Philosophy of Science and Technology	M.A.+	Ph.D.
History of Art	M.A.+ M.V.S.	Ph.D.
Human Development and Applied Psychology	M.A.+ M.Ed.+	Ed.D.A Ph.D.
Immunology	M.Sc.	Ph.D.
Industrial Relations	M.I.R.H.R.+	Ph.D.
Information Studies	M.I.St.+ J.D./M.I.St.	Ph.D. Ph.D.'
Integrated Manufacturing (CP)	M.Eng.	
International Relations (CP)	M.A. M.Sc. J.D./M.A.	
Italian Studies	M.A.+	Ph.D.
Jewish Studies (CP)		Ph.D.
Knowledge Media Design (CP)	M.A. M.Sc. M.I.St. M.Eng. M.A.Sc. M.Arch. M.L.A. M.U.D.	Ph.D.
Laboratory Medicine and Pathobiology	M.Sc.	Ph.D.
Law	J.D./M.I.St. LL.M.+ M.S.L.	S.J.D.
Linguistics	M.A.+	Ph.D.
Management	J.D./M.B.A. B.A.Sc./M.B.A. M.A./M.B.A. M.B.A.+ M.M.P.A. M.N./M.B.A.	Ph.D.
Management and Economics (CP)		Ph.D.
Materials Science and Engineering	M.A.Sc. M.Eng.+	Ph.D.
Mathematical Finance	M.M.F.	
Mathematics	M.Sc +	Ph.D.

Mechanical and Industrial Engineering	M.A.Sc. M.Eng.+	Ph.D.
Medical Biophysics	MSc.	Ph.D.
Medical Science	M.Sc.	Ph.D.
Medieval Studies	M.A.+	Ph.D.
Molecular and Medical Genetics	M.Sc.	Ph.D.
Museum Studies	M.M.St	
Music	M.A. Mus.M.	Mus.Doc. Ph.D.
Near and Middle Eastern Civilizations	M.A.+	Ph.D.
Neuroscience (CP)	M.A. M.Sc.	Ph.D.
Nursing Science	M.N.+ M.N/M.B.A.	Ph.D. Ph.D.[1]
Nutritional Sciences	M.Sc.+	Ph.D.
Occupational Therapy	M.Sc.OT	
Pharmaceutical Sciences	M.Sc.+	Ph.D.
Pharmacology	M.Sc.+	Ph.D.
Philosophy	M.A.+	J.D./Ph.D. Ph.D.
Physical Therapy	M.Sc.PT M.Sc.PT/M.Sc.	
Physics	M.Sc.	Ph.D.
Physiology	MSc.	Ph.D.
Planning	M.Sc.PI.+ M.U.D.S.+	
Political Science	J.D./M.A. M.A.+	J.D./Ph.D. Ph.D.
Proteomics and Bioinforrnatics (CP)		Ph.D.
Psychology	M.A.	Ph.D.
Public Health Sciences	M.H.Sc.+ M.Sc.+	Ph.D. Ph.D.[1]
Rehabilitation Science	M.Sc.+ M.Sc.PT/M.Sc.	Ph.D.
Religion	M.A.+	Ph.D.
Russian and East European Studies	J.D./M.A. M.A. M.B.A./M.A.	
Semiotics (CP)	M.A.	
Slavic Languages and Literatures	M.A.	Ph.D.
Social Work	J.D/M.S.W. M.H.Sc./M.S.W. M.S.W.+	Ph.D.
Sociology	M.A.+	Ph.D.
Sociology and Equity Studies in Education	M.A.+ M.Ed.+	Ph.D. Ed.D.A
Software Engineering (CP)	M.Eng. MSc.	
South Asian Studies (CP)	M.A. M.S.W.	Ph.D.
Spanish	M.A.+	Ph.D.
Speech-Language Pathology	M.H.Sc.+ M.Sc.	Ph.D.
Statistics	M.Sc.+	Ph.D.
Theory and Policy Studies in Education	M.A.+ M.Ed.+	Ed.D.A Ph.D. Ph.D.[1]
Toxicology, Biomedical (CP)	M.Sc.	Ph.D.
Women's Studies (CP)	LL.M M.A. M.Ed. M.H.Sc. MSc. M.S.W.	Ed.D.A Ph.D S.J.D.
Wood Products Engineering (CP)	M.A.Sc. M.Sc.F.	
Zoology	MSc.	Ph.D.

(CP) Collaborative Programs are offered by two or more graduate units using the teaching and facilities of the collaborating units. The student must be admitted to, and enrol in, one of the collaborating units, but may design his or her program from courses and research offered in the collaborating units.

+Part-time studies program is available. Consult the graduate unit for details.

^ All Ed.D. programs have a full-time component. Consult the graduate unit for details.

[1] Flexible delivery. This model appeals to candidates who are able to combine work experience with graduate training.

1

General Regulations

In this section:

Introduction
Organization of the School of Graduate Studies
Student Categories
Admissions Standards and Procedures
Application for Admission to a Degree Program
Structure of Academic Programs
Registration Policies and Procedures
Enrolment Policies and Procedures
Good Academic Standing and Satisfactory Academic Progress
Academic Appeals
Graduate Grading and Evaluation Practices Policy
Graduation and Submission of Thesis
intellectual Property
Research Ethics
Policy on Academic Sanctions for Students Who Have Outstanding Obligations to the University
Code of Behaviour on Academic Matters
Code of Student Conduct
Policy on Access to Student Academic Records
Safety in Field Research
Statement on Human Rights

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 Graduate 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 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 to graduate studies pre-eminence in formal education.

ORGANIZATION OF THE SCHOOL OF GRADUATE STUDIES

The School of Graduate Studies is responsible for all graduate studies 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. Until 2000, the School maintained the official records of the academic activities of all students registered in

the School. Individual graduate units are now responsible for maintenance of the official academic records of graduate students

By statute of the University of Toronto, 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 Council

The Council is an academic advisory body reporting directly to the Governing Council of the University of Toronto. The Council consists of 35 elected and 10 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 new proposals in graduate studies. The Council is concerned with the quality of graduate education across the university as a whole.

The Divisions

Division I - Humanities
Division II - Social Sciences
Division III - Physical Sciences
Division IV - Life Sciences

Each division has:

1 ***An Associate Dean.***
2 ***An Executive Committee*** (consisting of the chair or graduate coordinator of each graduate unit, the division's elected representatives on Council, and additional faculty members and students) primarily responsible for matters of policy. Each Executive Committee is chaired by the Associate Dean for that division.
3 ***A Nominating Committee*** consisting of the chairs/directors of the departments/centres/institutes from the division. The committee is chaired by the Dean. The committee meets, as needed, to advise the Dean on the selection of a new Associate Dean for the Division.

The four divisions share an Admissions and Programs Committee, primarily responsible for the approval of nonstandard admission and program cases. An Associate Dean acts as chair.

Further information on the role and function of Council and the Divisional Committees may be obtained from the Office of the Director of Quality Assessment and Governance.

Graduate Units

Each graduate student is enrolled in one of the graduate departments/centres/institutes which offer graduate study. Although interdisciplinary studies within collaborative programs may be undertaken, a student must register in a single 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.

Departments

The graduate departments offer degree programs and courses and conduct research.

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.

Collaborative Programs

The School of Graduate Studies currently offers about 36 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 fulfil 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.

Degree Programs
Degree programs are listed alphabetically in Section 8 of the SGS *Calendar.* They are also described on the SGS Web site www.sgs.utoronto.ca.

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:
1 associate member
2 full member
3 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 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 Student and Special (non-degree) Student.

1 Degree Student
A degree student is registered in a graduate degree program in the School of Graduate Studies and is considered as a *candidate* for the degree following first registration.

Degree 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.

2 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.

ADMISSIONS 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.

1 Academic Requirements for Admission

Master's Programs

a. 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.
b. 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.
c. At least two letters of reference are required.
d. Other qualifications as may be specified by a graduate unit.

Doctor of Philosophy Programs

a. 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 Ph.D. program is also available when permitted by the graduate unit. See also Admission Requirements under Degree Regulations.
b. 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.
c. At least two letters of reference are required.
d. Other qualifications as may be specified by a graduate unit.

Other Doctoral Programs

a. 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.
b. 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.
c. At least two letters of reference are required.
d. 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.

2 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.

a. ***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
The TOEFL examination is offered in two formats: the traditional paper-based format (only offered on specific dates in a limited number of countries) and the computer-based format (offered year-round). Applicants in countries where the computer-based testing is not available must register for the paper-based TOEFL that includes the Test of Written English (TWE) component. The computer-based test automatically includes an essay rating component which is similar to the TWE. All applicants must satisfy a minimum score requirement on the TOEFL and on the TWE or Essay Rating component to be considered for admission. The accompanying chart lists the minimum TOEFL score requirements set by each of the four SGS academic divisions.

ACADEMIC DIVISION	Minimum Score Requirement—including TWE or Essay Rating Score Requirement *	
	Paper-Based Test and TWE	Computer-Based Test and Essay Rating Score
HUMANITIES	Overall score 580 TWE 5	Overall score 237 Essay Rating 5
SOCIAL SCIENCES	Overall score 580 TWE 5	Overall score 237 Essay Rating 5
PHYSICAL & ENGINEERING SCIENCES	Overall score 580 TWE 4	Overall score 237 Essay Rating 4
LIFE SCIENCES	Overall score 580 TWE 5	Overall score 237 Essay Rating 5
*Consult the department to which you are applying to determine if a higher minimum score is required		

b. ***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

c. ***International English Language Testing System (IELTS)***
University of Cambridge Local Examinations Syndicate
1 Hills Road
Cambridge, U.K.
CB12EU
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

d. ***The Certificate of Proficiency in English (COPE)***
COPE Testing Limited
429 Danforth Avenue
PO. Box 462
Toronto, Ontario
M4K 1P1
E-mail: info@copetest.com
Web: www.copetest.com
Required score: 4 (with at least 1 in each component and 2 in the writing component)

e. ***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 Uni-

versity 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 ADMISSION TO A DEGREE PROGRAM

Procedures

1 Formal application for admission should be submitted on the standard forms available from the graduate units. Applicants must include an application fee of $90 (certified cheque or money order in Canadian funds made payable to the University of Toronto; payment by Master Card or Visa will also be accepted). No decision on the application will be sent to the student 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.
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 section 4 of this calendar titled Financial Support and Exchange Programs.

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 academic fees but do pay Summer incidental 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 Section 2 for the Ed.D., Ph.D., M.A./M.Sc., M.A.Sc.,

M.Ed., M.Eng., and M.H.Sc. For other degrees, consult the relevant graduate unit listing in Section 8 Graduate Programs of the SGS 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.

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. See the list of Degree Programs in the front section of this publication.

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 (OISUUT) should consult OIS/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, M.Sc., and M.A.Sc. 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 candidacy 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 section.

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 candidate 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 candidate 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.

Lapsed Status
If a candidate fails to register, or is not permitted to register because the time limit for the degree sought has elapsed, candidacy in the School lapses. There are two states of lapsed status, as noted below:

1 ***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 candidacy. Candidacy may only be re-established if an application for reinstatement is approved both by the graduate unit and the School, and payment is made of the prescribed fees for the year(s) in which the candidate failed to register.

2 ***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 student may not register further and degree candidacy is considered to have lapsed. However, in special circumstances, a student may be reinstated once only, for a maximum of 12 months. See index for reference to Time for Completion section in the Ph.D. 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 Ph.D. 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 Ph.D. studies and will be registered full-time in the Ph.D. and part-time in the master's program. Only the appropriate Ph.D. fees will be charged.
4 The period of dual registration will be either September 1 to January 31 or January 1 to May 1.

In order to receive credit for the Ph.D. for the period as a dual registrant, the student must be recommended for the award of the master's degree by January 27 for September dual registrants, or by April 28 for January dual registrants. Otherwise, the Ph.D. registration will be cancelled, no credit for the Ph.D. will be allowed, and the student will continue to be registered as a master's candidate only. An appropriate fees adjustment will be made so that the student will be charged fees only as a master's student. Ph.D. 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 Ph.D. 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 Ph.D. 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.

Sep. 30, 2005	Deadline to add full courses (Y) and half-courses (H).
Nov. 4, 2005	Deadline to drop a Fall Session full course or half-course without academic penalty.
Jan. 27, 2006	Deadline to add Winter Session full courses (Y) and half-courses (H).
Mar. 3, 2006	Deadline to drop a full course (Y) or Winter Session half-course (H), or withdraw from a program without academic penalty.

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:

Jan. 13, 2006	Fall Session (Y, H) courses
May 19, 2006*	Fall/Winter Session (Y) and Winter Session (Y, H) courses *For students receiving degrees at Spring Convocation, grades must be submitted by April 28.
Sep. 15, 2006	Summer Session courses and extended courses

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 available to the class the methods by which student performance shall be evaluated.

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.

1 ***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.

2 ***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 nonacademic - 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 reasons for the delay are both serious and substantiated: the student is to provide a statement detailing the reasons, together with a physician's letter in the case of illness;
b. the student would not be granted an unfair academic advantage over fellow students in the course;
c. the student would not be placing in jeopardy the normal and satisfactory completion of new course work; and
d. the student does have a reasonable chance of completing outstanding requirements within the time to be allotted.

3 ***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:

May 19,2006	Fall Session (Y, H) courses
Sep. 15, 2006	Fall/Winter Session (Y) and Winter Session (Y, H) courses
Jan. 12, 2007	Summer Session courses and extended courses

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.

4 ***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.)

5 ***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.

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 candidates are admitted under the General Regulations of the School, described in Section 1 of this ***Calendar.*** The Degree Regulations for the various doctoral and master's degrees offered by the School are specified in Section 2 of this ***Calendar*** and in Section 8 of this ***Calendar,*** 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 in Section 8, 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 candidacy 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 candidacy.

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 of Section 8 of this Calendar and in material published separately by graduate units. Continued candidacy 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 the termination of the registration and candidacy of a student who fails to maintain satisfactory progress toward the completion of the degree for which the student is a candidate.

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 candidacy 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 Ph.D. Program

A candidate for the Ph.D. degree 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 candidate 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 candidacy 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 Ph.D. Program

A candidate for the Ph.D. degree enrolled in a full-time (as opposed to a flexible-time) program will be denied further registration in that program and will have his or her candidacy 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 candidate has not completed all requirements for the degree exclusive of thesis research—including course requirements, language requirements, qualifying departmental examinations-or
2 the candidate does not have an approved thesis topic, supervisor, or supervisory committee.

(Note: Some graduate units require candidates to register in courses that run continuously throughout the program, e.g., ongoing research seminar courses. The foregoing time limit does not apply to such courses.) In exceptional circumstances, such a candidate 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 Program Committee.

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 department in which the course was taken, upon notification to the student's home department 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 Ph.D. 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 will not have the right to overturn a failed final Ph.D. 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 Associate Dean for advice and/or informal mediation. The Associate Dean will serve as informal mediator, attempting to resolve the dispute or clarify issues. Timelines are not affected by mediation. Consultation with the Associate 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

a 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.

b This is the first step for a student who is making an appeal regarding the failure of the final Ph.D. 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 being appealed.

GRADUATE GRADING AND EVALUATION PRACTICES POLICY

Purpose
The purpose of the Graduate Grading and Evaluation Practices Policy is to ensure:
(a) that grading practices in the School of Graduate Studies are consistent with those throughout the University and reflect appropriate academic standards;

	Steps and Timelines	
Timeline for student action at each stage *See Note A below.*	**Step** *See Note B below.*	**Timeline for decision/action by University body at each stage** *See Note C below.*
8 weeks from date of decision being appealed	**1** ***Informal*** **a** Student to instructor **b** Student to graduate coordinator **2** ***Department-level Appeal*** Notice of Appeal to GDAAC[1] Note: Appeals related to failure of the final Ph.D. oral examination or to termination of registration in a graduate program must be made directly to GAAB [2] - see Step 3b below.	***8 weeks*** from filing of Notice of Appeal to GDAAC[1]
a ***8 weeks*** from decision of chair **b** ***8 weeks*** from written notification of failure of the final Ph.D. oral examination or termination of registration in a graduate program	**3** ***SGS Appeal*** **a** Notice of Appeal to GAAB[1] **b** Appeal begins here for students who wish to appeal failure of the final Ph.D. oral examination or termination of registration in a graduate program.	***8 weeks*** from filing of Notice of Appeal to GAAB[2]
90 days from decision of GAAB[2]	**4** ***Governing Council Appeal*** Notice of Appeal to GCAAC[3]	N/A

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 Associate Dean at any stage before filing an appeal with the Graduate Academic Appeals Board (GAAB). Consultation with the Associate 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

(b) that the evaluation of student performance is made in a fair and objective manner against these academic standards;
(c) that grade scales in the School of Gradute 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 Gradute 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.

1.1 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.

1.2 Grades for each course shall be assigned with reference to the following meanings:

Excellent
Good
Adequate
Inadequate

Grade Scales

1.3 Courses taken for graduate credit are assigned a letter grade according to the School of Graduate Studies usage as follows:

Letter Grade	Grade Meaning
A+	
A	Excellent
A-	
B+	
B	Good
B-	
FZ	Inadequate

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:

Letter Grade	Grade Meaning
A+	90-100%
A	85-89%
A-	80-84%
B+	77-79%
B	73-76%
B-	70-72%
FZ	0-69%

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 Associate Dean on the basis of incomplete course work in special circum-

stances (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.

SDF 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.

TRF 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.

WDR 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.

XMP Exemption: Granted on the basis of credit for work done elsewhere. It carries credit for the course, but is not considered for averaging purposes.

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

1.4 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

1.5 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 Ill.

1.6 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.

(c) A grade not reported in the form originally assigned by the offering division must on request be made available to the student in that form by the reporting division.

1.7 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.

1.8 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

II.1 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 & 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 at their request.

(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 Associate Dean of the Division. 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 the 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 is 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.

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 unbound copy must be submitted to the School. 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 must be submitted with the unbound copy. 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. 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 for Microfilming and Binding”.

Further details about doctoral theses may be found in Section 2 Degree Regulations under Doctor of Philosophy, Final Oral Examination.

Master’s Thesis

After completing the thesis defence, the original unbound thesis, along with an abstract of no more than 150 words, the signed University of Toronto “Authority to Distribute” form; the “Library and Archives Canada Theses Non-exclusive License” form, and “Subject Category” form must be submitted to the School of Graduate Studies. Deadline dates, “Guidelines for the Preparation of Theses”, binding information, and the required three forms are available on the SGS Web site at www.sgs.utoronto.ca, under Current Students. The candidate must submit bound copies of master’s theses to the relevant graduate unit. Consult the graduate unit for submission deadlines dates and copy quantity.

Degree recommendations submitted to SGS by the graduate units are approved when the unbound thesis is received. The unbound thesis, along with the three forms, are forwarded to the Library and Archives Canada microfilming agent - ProQuest Information and Learning - for microfilming. These forms authorize Library and Archives Canada to make the microfiche available on demand. ProQuest Information and Learning procures a copy and submits all abstracts to Master's Abstracts International. At the time the thesis is submitted to SGS, a fee of $37.00 is charged to the student to offset the cost incurred by Library and Archives Canada.

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 by microfilm 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 Council of the School of Graduate Studies.

Degree Recommendations

When all requirements for a graduate degree program have been fulfilled, the graduate unit is required to submit a degree recommendation to the School of Graduate Studies indicating that the program has been satisfactorily completed.

Convocation Ceremonies

Convocation ceremonies are held twice a year, in the spring and fall. Upon completion of degree requirements, students must graduate at the first available convocation ceremony. The Director of Student Services of the School of Graduate Studies submits the names of the graduands to the Office of Convocation. This office advises students regarding procedures for the convocation ceremony and is responsible for issuing diplomas.

Graduate degrees may also be conferred in absentia in March, upon the request of the student.

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

INTELLECTUAL PROPERTY

Telephone: (416) 978-7833
Fax: (416) 978-5821
E-mail: monique.mcnaughton@utoronto.ca
Web: www.rir.utoronto.ca/utech/
www.innovationsfoundation.utoronto.ca/
www.sgs.utoronto.ca/current/policies/intellproperty.asp

Intellectual Property arising from research at the University is most often owned by the property's creator(s) and the University. Except where otherwise determined by a separate third-party agreement, the University's Inventions Policy allows creators to assume full ownership of the intellectual property they create. 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. Faculty members also have 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 reported to the University of Toronto Research Services (UTRS). If the creator(s) choose to assume full ownership, the University will assign its ownership interest to the creator(s) in return for certain undertakings, including returning to the University 25% of the proceeds from commercialization.

Among the various commercialization options available to creator(s) is the support offered through the University of Toronto Innovations Foundation. The Innovations Foundation is a subsidiary corporation of the University. It was established to assist in patenting, marketing, and commercializing intellectual property. The services of the Innovations Foundation are provided under an agreement negotiated between the owners of the intellectual property and the Foundation in exchange for a further share of future revenue.

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. 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 UTRS, from the Web sites, and from the Innovations Foundation. For more information, visit the Web sites listed above.

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.

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.

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. Below are extracts from the Code covering offences, procedures, and sanctions. The full text of the Code is available on the University of Toronto Web site at www.utoronto.ca/govcncl/pap/alphapol.htm. The Code is enforced by the Dean, the Provost, and the University Disciplinary Tribunal. In cases involving graduate students, the divisional dean is the Dean of the School of Graduate Studies.

A. Preamble

The concern of the Code of Behaviour on Academic Matters is with the responsibilities of all parties to the integrity of the teaching and learning relationship. Honesty and fairness must inform this relationship, whose basis remains one of mutual respect for the aims of education and for those ethical principles which must characterize the pursuit and transmission of knowledge in the University.

What distinguishes the University from other centres of research is the central place which the relationship between teaching and learning holds. It is by virtue of this relationship that the University fulfils an essential part of its traditional mandate from society, and, indeed, from history: to be an expression of, and by so doing to encourage, a habit of mind which is discriminating at the same time as it remains curious, which is at once equitable and audacious, valuing openness, honesty and courtesy before any private interest.

This mandate is more than a mere pious hope. It represents a condition necessary for free enquiry, which is the University's life blood. Its fulfilment depends upon the well being of that relationship whose parties define one another's roles as teacher and student, based upon differences in expertise, knowledge and experience, though bonded by respect, by a common passion for truth and by mutual responsibility to those principles and ideals that continue to characterize the University.

This Code is concerned, then, with the responsibilities of faculty members and students, not as they belong to administrative or professional or social groups, but as they cooperate in all phases of the teaching and learning relationship.

Such cooperation is threatened when teacher or student forsakes respect for the other—andfor others involved in learning—in

favour of self-interest, when truth becomes a hostage of expediency. On behalf of teacher and student and in fulfilment of its own principles and ideals, the University has a responsibility to ensure that academic achievement is not obscured or undermined by cheating or misrepresentation, that the evaluative process meets the highest standards of fairness and honesty, and that malevolent or even mischievous disruption is not allowed to threaten the educational process.

These are areas in which teacher and student necessarily share a common interest as well as common responsibilities.

B. Offences

The University and its members have a responsibility to ensure that a climate that might encourage, or conditions that might enable, cheating, misrepresentation or unfairness not be tolerated. To this end, all must acknowledge that seeking credit or other advantages by fraud or misrepresentation, or seeking to disadvantage others by disruptive behaviour is unacceptable, as is any dishonesty or unfairness in dealing with the work or record of a student.

Wherever in this Code an offence is described as depending on "knowing", the offence shall likewise be deemed to have been committed if the person ought reasonably to have known.

B.I.

1. It shall be an offence for a student knowingly:
   (a) to forge or in any other way alter or falsify any document or evidence required by the University, or to utter, circulate or make use of any such forged, altered or falsified document, whether the record be in print or electronic form;
   (b) to use or possess an unauthorized aid or aids or obtain unauthorized assistance in any academic examination or term test or in connection with any other form of academic work;
   (c) to personate another person, or to have another person personate, at any academic examination or term test or in connection with any other form of academic work;
   (d) to represent as one's own any idea or expression of an idea or work of another in any academic examination or term test or in connection with any other form of academic work, i.e., to commit plagiarism:
   (e) to submit, without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course or program of study in the University or elsewhere;
   (f) to submit any academic work containing a purported statement of fact or reference to a source which has been concocted.

2. It shall be an offence for a faculty member knowingly:
   (a) to approve any of the previously described offences;
   (b) to evaluate an application for admission or transfer to a course or program of study by reference to any criterion that is not academically justified;
   (c) to evaluate academic work by a student by reference to any criterion that does not relate to its merit, to the time within which it is to be submitted or to the manner in which it is to be performed.

3. It shall be an offence for a faculty member and student alike knowingly:
   (a) to forge or in any other way alter or falsify any academic record, or to utter, circulate or make use of any such forged, altered or falsified record, whether the record be in print or electronic form;
   (b) to engage in any form of cheating, academic dishonesty or misconduct, fraud or misrepresentation not herein otherwise described, in order to obtain academic credit or other academic advantage of any kind.

4. A graduate of the University may be charged with any of the above offences committed knowingly while he or she was an active student, when, in the opinion of the Provost, the offence, if detected, would have resulted in a sanction sufficiently severe that the degree would not have been granted at the time that it was.

B.II Parties to Offences

1. (a) Every member is a party to an offence under this Code who knowingly:
   (i) actually commits it;
   (ii) does or omits to do anything for the purpose of aiding or assisting another member to commit the offence:

(iii) does or omits to do anything for the purpose of aiding or assisting any other person who, if that person were a member, would have committed the offence;
(iv) abets, counsels, procures or conspires with another member to commit or be a party to an offence; or
(v) abets, counsels, procures or conspires with any other person who, if that person were a member, would have committed or have been a party to the offence.

(b) Every party to an offence under this Code is liable upon admission of the commission thereof, or upon conviction, as the case may be, to the sanctions applicable to that offence.

2. Every member who, having an intent to commit an offence under this Code, does or omits to do anything for the purpose of carrying out that intention (other than mere preparation to commit the offence) is guilty of an attempt to commit the offence and liable upon conviction to the same sanctions as if he or she had committed the offence.

3. When a group is found guilty of an offence under this Code, every officer, director or agent of the group, being a member of the University, who directed, authorized or participated in the commission of the offence is a party to and guilty of the offence and is liable upon conviction to the sanctions provided for the offence.

C. Procedures in Cases Involving Students

At both the divisional level and the level of the University Tribunal, the procedures for handling charges of academic offences involving students reflect the gravity with which the University views such offences. At the same time, these procedures and those which ensure students the right of appeal represent the University's commitment to fairness and the cause of justice.

C.I.(a) Divisional Procedures

Note: Where a student commits an offence, the faculty in which the student is registered has responsibility over the student in the matter. In the case of Scarborough and Erindale Colleges, the college is deemed to be the faculty.

1. No hearing within the meaning of section 2 of the Statutory ***Powers Procedure*** Act is required for the purposes of or in connection with any of the discussions, meetings and determinations referred to in C.I.(a), and such discussions, meetings and determinations are not proceedings of the Tribunal.

2. Where an instructor has reasonable grounds to believe that an academic offence has been committed by a student, the instructor shall so inform the student immediately after learning of the act or conduct complained of, giving reasons, and invite the student to discuss the matter. Nothing the student says in such a discussion may be used or receivable in evidence against the student.

3. If after such discussion, the instructor is satisfied that no academic offence has been committed, he or she shall so inform the student and no further action shall be taken in the matter by the instructor, unless fresh evidence comes to the attention of the instructor, in which case he or she may again proceed in accordance with subsection 2.

4. If after such discussion, the instructor believes that an academic offence has been committed by the student, or if the student fails or neglects to respond to the invitation for discussion, the instructor shall make a report of the matter to the department chair or through the department chair to the dean. (See also section C.I.(b) 1.)

5. When the dean or the department chair, as the case may be, has been so informed, he or she shall notify the student in writing accordingly, provide him or her with a copy of the Code and subsequently afford the student an opportunity for discussion of the matter. In the case of the dean being informed, the chair of the department and the instructor shall be invited by the dean to be present at the meeting with the student. The dean shall conduct the interview.

6. Before proceeding with the meeting, the dean shall inform the student that he or she is entitled to seek advice, or to be accompanied by counsel at the meeting, before making, and is not obliged to make, any statement or admission, but shall warn that if he or she makes any statement or admission in the meeting, it may be used or receivable in evidence against the student in the hearing of any charge with respect to the alleged offence in question. The dean shall also advise the student, without further comment or discussion, of the sanctions that may be imposed under section C.I.(b), and

that the dean is not obliged to impose a sanction but may instead request that the Provost lay a charge against the student. Where such advice and warning have been given, the statements and admissions, if any, made in such a meeting may be used or received in evidence against the student in any such hearing.

7. If the dean, on the advice of the department chair and the instructor, or if the department chair, on the advice of the instructor, subsequently decides that no academic offence has been committed and that no further action in the matter is required, the student shall be so informed in writing and the student's work shall be accepted for normal evaluation or, if the student was prevented from withdrawing from the course by the withdrawal date, he or she shall be allowed to do so. Thereafter, the matter shall not be introduced into evidence at a Tribunal hearing for another offence.

8. If the student admits the alleged offence, the dean or the department chair may either impose the sanction(s) that he or she considers appropriate under section C.I.(b) or refer the matter to the dean or Provost, as the case may be, and in either event shall inform the student in writing accordingly. No further action in the matter shall be taken by the instructor, the department chair or the dean if the dean imposes a sanction.

9. If the student is dissatisfied with a sanction imposed by the department chair or the dean, as the case may be, the student may refer the matter to the dean or Provost as the case may be, for consideration.

10. If the student does not admit the alleged offence, the dean may, after consultation with the instructor and the department chair, request that the Provost lay a charge against the student. If the Provost agrees to lay a charge, the case shall then proceed to the Trial Division of the Tribunal.

11. Normally, decanal procedures will not be examined in a hearing before the Tribunal. A failure to carry out the procedures referred to in this section, or any defect or irregularity in such procedures, shall not invalidate any subsequent proceedings of or before the Tribunal, unless the chair of the hearing considers that such failure, defect or irregularity resulted in a substantial wrong, detriment or prejudice to the accused. The chair will determine at the opening of the hearing whether there is to be any objection to an alleged defect, failure or irregularity.

12. No degree, diploma or certificate of the University shall be conferred or awarded, nor shall a student be allowed to withdraw from a course from the time of the alleged offence until the final disposition of the accusation. However, a student shall be permitted to use University facilities while a decision is pending, unless there are valid reasons for the dean to bar him or her from a facility. When or at any time after an accusation has been reported to the dean, he or she may cause a notation to be recorded on the student's academic record and transcript, until the final disposition of the accusation, to indicate that the standing in a course and/or the student's academic status is under review. A student upon whom a sanction has been imposed by the dean or the department chair under section C.I.(b) or who has been convicted by the Tribunal shall not be allowed to withdraw from a course so as to avoid the sanction imposed.

13. A record of cases disposed of under section C.I.(a) and of the sanctions imposed shall be kept in the academic unit concerned and may be referred to by the dean in connection with a decision to prosecute, or by the prosecution in making representations as to the sanction or sanctions to be imposed by the Tribunal, for any subsequent offence committed by the student. Information on such cases shall be available to other academic units upon request and such cases shall be reported by the dean to the Secretary of the Tribunal for use in the Provost's annual report to the Academic Board. The dean may contact the Secretary of the Tribunal for advice or for information on cases disposed of under section C.II. hereof.

14. Where a proctor or invigilator, who is not a faculty member, has reason to believe that an academic offence has been committed by a student at an examination or test, the proctor or invigilator shall so inform the student's dean or department chair, as the case may be, who shall proceed as if he or she were an instructor, by analogy to the other provisions of this section.

15. In the case of alleged offences not covered by the procedures above and not involving the submission of academic work, such as those concerning forgery or uttering, and in cases involving cancellation, recall or suspension of a degree, diploma or certificate, the procedure shall be regulated by analogy to the other procedures of this section.

C.I.(b) Divisional Sanctions

1. In an assignment worth ten percent or less of the final grade, the department chair may handle the matter if:
   (i) the student admits guilt: and
   (ii) the assignment of a penalty is limited to at most a mark of zero for the piece of work.

If the student does not admit guilt, or if the department chair chooses, the matter shall be brought before the dean.

2. One or more of the following sanctions may be imposed by the dean where a student admits to the commission of an alleged offence:

(a) an oral and/or written-reprimand;
(b) an oral and/or written reprimand and, with the permission of the instructor, the resubmission of the piece of academic work in respect of which the offence was committed, for evaluation. Such a sanction shall be imposed only for minor offences and where the student has committed no previous offence;
(c) assignment of a grade of zero or a failure for the piece of academic work in respect of which the offence was committed;
(d) assignment of a penalty in the form of a reduction of the final grade in the course in respect of which the offence was committed;
(e) denial of privileges to use any facility of the University, including library and computer facilities;
(f) a monetary fine to cover the costs of replacing damaged property or misused supplies in respect of which the offence was committed;
(g) assignment of a grade of zero or a failure for the course in respect of which the offence was committed;
(h) suspension from attendance in a course or courses, a program, an academic division or unit, or the University for a period of not more than twelve months. Where a student has not completed a course or courses in respect of which an offence has not been committed, withdrawal from the course or courses without academic penalty shall be allowed.

3. The dean shall have the power to record any sanction imposed on the student's academic record and transcript for such length of time as he or she considers appropriate. However, the sanctions of suspension or a notation specifying academic misconduct as the reason for a grade of zero for a course shall normally be recorded for a period of five years.

4. The Provost shall, from time to time, indicate appropriate sanctions for certain offences. These guidelines shall be sent for information to the Academic Board and attached to the Code.

C.II.(a) Tribunal Procedures

1. A prosecution for an alleged academic offence shall be instituted by the laying of a charge by the Provost against the accused. This is done when the student does not admit guilt; when the sanction desired is beyond the power of the dean to impose; when the student has been found guilty of a previous offence; or when the student is being accused simultaneously of two or more different offences involving more than one incident.

2. No charge shall be laid except with the agreement of the dean concerned and of the Provost, after consultation between the Provost and the Discipline Counsel.

3. A charge shall be in writing, addressed to the accused, signed by or under the authority of the Provost and filed with the Secretary. It shall contain a statement that the student is charged with having committed an offence specified therein, with sufficient particulars of the circumstances to enable the student to identify the alleged act or conduct giving rise to the charge.

4. Upon receipt by the Secretary of a charge which appears to be in proper form, the member of the Tribunal designated to be the chair of the hearing and the Secretary shall immediately determine and give appropriate notice of a date, time and place for the hearing.

5. Withdrawal of a student from a course or program of study shall not preclude or affect any prosecution before the Tribunal in respect of an alleged academic offence.

6. The proceedings at a hearing, including the evidence and the verdict of the panel shall be recorded by the Secretary by means of a tape recording, stenographic reporter or other reliable means.

7. The procedures of the Tribunal shall conform to the requirements of the Statutory Powers Procedure Act, Revised Statutes of Ontario, 1990, Chapter S. 22, as amended from time to time.

8. The Tribunal may, from time to time, by a majority of its members, make, adopt and modify rules governing its procedures which are not inconsistent with the provision hereof, and all such rules and modifications shall be reported to the Academic Board for information.

9. The onus of proof shall be on the prosecutor, who must show on clear and convincing evidence that the accused has committed the alleged offence.

10. The accused shall not be compelled to testify at his or her hearing.

11. The divisions of the Tribunal are:
(a) Trial; and
(b) Appeal.

12. The members of the Trial Division of the Tribunal shall consist of a Senior Chair, two Associate Chairs and up to fifteen co-chairs, appointed by the Academic Board.

13. No presiding member of the Trial Division of the Tribunal shall be a full-time student or a full-time member of the teaching staff or a member of the administrative staff.

14. The Senior Chair, Associate Chairs and co-chairs, shall be legally qualified.

15. The Senior Chair shall be the chair of the Tribunal and either the Senior Chair, an Associate Chair or a co-chair, as selected by the Secretary, shall preside at trial hearings of the Tribunal.

16. Trial hearings of the Tribunal involving students registered at Scarborough College shall normally be held on the Scarborough campus of the University and those involving students registered at Erindale College shall normally be held on the Erindale campus of the University.

17. (a) The Tribunal shall,
(i) hear and dispose of charges brought under the Code;
(ii) report its decisions for information to the Academic Board;
(iii) make recommendations to the Governing Council as contemplated by the Code;
(iv) advise the Academic Board, from time to time, on policy and procedures with respect to the Code; and
(v) determine its practice and procedures, subject to the provisions hereof.
(b) Where it is considered to be warranted by the circumstances, the chair of a hearing may in his or her discretion award costs of any proceedings at trial, and may make orders as to the party or parties to and by whom and the amounts and manner in which such costs are to be paid.

18. Hearings in the Trial Division of the Tribunal shall be by a hearing panel composed of three persons, of whom one shall be a student, one shall be a faculty member and the third shall be the Senior Chair, an Associate Chair or a co-chair of the Tribunal.

19. The members of each panel (other than the chair) shall be drawn from a pool consisting of at least 15 students who are not also faculty members and at least 15 faculty members who are not students. The members of such pool shall be appointed by the Secretary, drawn from the various academic divisions and units of the University, and shall serve for a period of two years. The appointments shall be renewable upon invitation by the Senior Chair of the Tribunal.

20. Panel members for each case shall be selected by the Secretary who shall exercise due discretion in excluding members who may know either the accused or the circumstances of the alleged offence. Generally, student members will not be drawn from the same program of study as the accused. Faculty members from the department in which an offence is alleged to have occurred will be excluded from the panel.

21. Either the accused or the prosecution may challenge prior to the hearing, and the chair of the hearing may disqualify any prospective panel member for cause which in his or her opinion justifies such disqualification.

22. At trial hearings of the Tribunal,
(a) the chair of the hearing shall determine all questions of law and has a vote on the verdict and sanction; and
(b) the panel shall determine all questions of fact and render a verdict according to the evidence.

23. Where, after a charge has been laid by the Provost but before a Tribunal hearing takes place, the accused admits the alleged offence, the Provost may refer the matter either (i) to the

dean, who shall impose the sanction(s) that he or she considers appropriate under section C.I .(b); or (ii) to a panel, in which event the panel may convict the accused without the prosecution having to lead evidence of guilt, and the panel shall impose a sanction or sanctions in accordance with section 25 or 26; provided that before any sanction is imposed, the dean or the panel, as the case may be, shall have afforded the accused an opportunity to offer an explanation and to present arguments and submissions as to sanction.

24. The verdict of a panel need not be unanimous but at least two affirmative votes shall be required for a conviction. Unless there are at least two affirmative votes for conviction, the accused shall be acquitted.

25. The sanction or sanctions to be imposed upon conviction at a hearing shall be determined by a majority of the panel members, and the panel shall give reasons for the sanction or sanctions imposed.

26. If the panel is unable to reach agreement, by a majority of its members, as to the sanction to be imposed, the chair of the hearing shall impose the sanction or set of sanctions which is the least severe of those that the individual members of the panel would impose.

27. There shall be a University Discipline Counsel and there may be one or more assistants to the Discipline Counsel, appointed by the Academic Board on the recommendation of the Provost.

28. The Discipline Counsel and any assistant shall be a barrister and solicitor qualified to practise law in Ontario and shall not be a full-time student or a full-time member of the teaching staff or a member of the administrative staff.

29. The Discipline Counsel or an assistant shall conduct all proceedings on behalf of the Provost before the Tribunal and on any appeal from a Tribunal decision.

30. The other duties of the Discipline Counsel and assistants shall be as determined by the Provost.

31. The Secretary of the Tribunal and his or her assistants shall be appointed by the Academic Board on the recommendation of the Provost.

32. The duties of the Secretary and assistants shall be determined by the Senior Chair and members of the Tribunal and reported to the Academic Board for information.

33. Where anything is required by the Code to be done by or with the Secretary, it may be done by or with the Secretary or any of his or her assistants.

C.II.(b) Tribunal Sanctions

1. One or more of the following sanctions may be imposed by the Tribunal upon the conviction of any student:

(a) an oral and/or written reprimand;

(b) and oral and/or written reprimand and, with the permission of the instructor, the resubmission of the piece of academic work in respect of which the offence was committed, for evaluation. Such a sanction shall be imposed only for minor offences and where the student has committed no previous offence;

(c) assignment of a grade of zero or a failure for the piece of academic work in respect of which the offence was committed;

(d) assignment of a penalty in the form of a reduction of the final grade in the course in respect of which the offence was committed;

(e) denial of privileges to use any facility of the University, including library and computer facilities;

(f) a monetary fine to cover the costs of replacing damaged property or misused supplies in respect of which the offence was committed;

(g) assignment of a grade of zero or a failure for any completed or uncompleted course or courses in respect of which any offence was committed;

(h) suspension from attendance in a course or courses, a program, an academic unit or division, or the University for such a period of time up to five years as may be determined by the Tribunal. Where a student has not completed a course or courses in respect of which an offence has not been committed, withdrawal from the course or courses without academic penalty shall be allowed;

(i) recommendation of expulsion from the University. The Tribunal has power only to recommend that such a penalty be imposed. In any such case, the recommendations shall be made by the Tribunal to the President for a recom-

mendation by him or her to the Governing Council. Expulsion shall mean that the student shall be denied any further registration at the University in any program, and his or her academic record and transcript shall record this sanction permanently . Where a student has not completed a course or courses in respect of which an offence has not been committed, withdrawal from the course or courses without academic penalty shall be allowed. If a recommendation for expulsion is not adopted, the Governing Council shall have the power to impose such lesser penalty as it sees fit.

(i) recommendation to the Governing Council for cancellation, recall or suspension of one or more degrees, diplomas or certificates obtained by any graduate; or

(ii) cancellation of academic standing or academic credits obtained by any former student who, while enrolled, committed any offence which if detected before the granting of the degree, diploma, certificate, standing or credits would, in the judgment of the Tribunal, have resulted in a conviction and the application of **a** sanction sufficiently severe that the degree, diploma, certificate, standing, credits or marks would not have been granted.

2. The hearing panel shall have the power to order that any sanction imposed by the Tribunal be recorded on the student's academic record and transcript for such length of time as the panel considers appropriate.

3. The Tribunal may, if it considers appropriate, report any case to the Provost who may publish a notice of the decision of the Tribunal and the sanction or sanctions imposed in the University newspapers, with the name of the student withheld.

CODE OF STUDENT CONDUCT

Non-academic offences are defined in the University's Code of Student Conduct, the full text of which is available on the University of Toronto Web site at www.utoronto.ca/govcncl/pap/alphapol.htm. Extracts from the Code, provided below, are printed in ordinary type. References in square brackets are to original section numbering in the Code.

[B.] Offences

The following offences constitute conduct that shall be deemed to be offences under this ***Code,*** when committed by a student of the University of Toronto, provided that such conduct

(i) has not been dealt with as failure to meet standards of professional conduct as required by a college, faculty or school; and

(ii) is not specifically assigned to the jurisdiction of the University Tribunal, as in the case of offences described in the ***Code of Behaviour on Academic Matters,*** or to another disciplinary body within the University of Toronto, as in the case of sexual harassment as described in the Policy and Procedures: Sexual Harassment; or to a divisional disciplinary body, such as a residence council or a recreational athletics disciplinary body; or is covered under these policies but which is deemed by the head of the division to be more appropriately handled by the ***Code of Student Conduct;*** and

(iii) except as otherwise provided herein, occurs on premises of the University of Toronto or elsewhere in the course of activities sponsored by the University of Toronto or by any of its divisions; and

(iv) has not been dealt with under provisions for the discipline of students with respect to University offices and services whose procedures apply to students in several academic divisions, such as University residences, libraries or athletic and recreational facilities.

1. Offences Against Persons

(a) No person shall assault another person sexually or threaten any other person with sexual assault.

(b) No person shall otherwise assault another person, threaten any other person with bodily harm, or knowingly cause any other person to fear bodily harm.

(c) No person shall knowingly create a condition that unnecessarily endangers the health or safety of other persons.

(d) No person shall threaten any other person with damage to such person's property, or knowingly cause any other person to fear damage to her or his property.

(e) No person shall engage in a course of vexatious conduct that is directed at one or more specific individuals, and)

that is based on the race, ancestry, place of origin, colour, ethnic origin, citizenship, sex, sexual orientation, creed, age, marital status, family status, handicap, receipt of public assistance or record of offences of that individual or those individuals, and

that is known to be unwelcome, and

that exceeds the bounds of freedom of expression or academic freedom as these are understood in University polices and accepted practices, including but not restricted to, those explicitly adopted.

Note: Terms in this section are to be understood as they are defined or used in the *Ontario Human Rights Code.* Vexatious conduct that is based on sex or sexual orientation is considered an offence under the University's *Policy and Procedures: Sexual Harassment.* If the Sexual Harassment Officer believes, after consultation with relevant parties, that a complaint based on sex or sexual orientation would be better handled under the *Code of Student Conduct,* the Officer may refer the matter to the appropriate head of division.

(f) (i) No person shall, by engaging in the conduct described in subsection (ii) below,

whether on the premises of the University or away from the premises of the University,

cause another person or persons to fear for their safety or the safety of another person known to them while on the premises of the University of Toronto or in the course of activities sponsored by the University of Toronto or by any of its divisions, or cause another person or persons to be impeded in exercising the freedom to participate reasonably in the programs of the University and in activities in or on the University's premises,

knowing that their conduct will cause such fear, or recklessly as to whether their conduct causes such fear.

(ii) The conduct mentioned in subsection (i) consists of

(a) repeatedly following from place to place the other person or anyone known to them;

(b) repeatedly and persistently communicating with, either directly or indirectly, the other person or anyone known to them;

(c) besetting or repeatedly watching the dwelling-house, or place where the other person, or anyone known to them, resides, works, carries on business or happens to be; or

(d) engaging in threatening conduct directed at the other person or any member of the family, friends or colleagues of the other person.

2. Disruption

No person shall cause by action, threat or otherwise, a disturbance that the member knows obstructs any activity organized by the University of Toronto or by any of its divisions, or the right of another member or members to carry on their legitimate activities, to speak or to associate with others.

For example, peaceful picketing or other activity outside a class or meeting that does not substantially interfere with the communication inside, or impede access to the meeting, is an acceptable expression of dissent. And silent or symbolic protest is not to be considered disruption under this Code. But noise that obstructs the conduct of a meeting or forcible blocking of access to an activity constitutes disruption.

3. Offences Involving Property

(a) No person shall knowlingly take, destroy or damage premises of the University of Toronto.

(b) No person shall knowingly take, destroy or damage any physical property that is not her or his own.

(c) No person shall knowingly destroy or damage information or intellectual property belonging to the University of Toronto or to any of its members.

(d) No person, in any manner whatsoever, shall knowingly deface the inside or outside of any building of the University of Toronto.

(e) No person, knowing the effects or property to have been appropriated without authorization, shall possess effects or property of the University of Toronto.

No person, knowing the effects or property to have been appropriated without authorization, shall possess any property that is not her or his own.

No person shall knowingly create a condition that unnecessarily endangers or

threatens destruction of the property of the University of Toronto or of any of its members.

4. **Unauthorized Entry or Presence**
No person shall, contrary to the expressed instruction of a person or persons authorized to give such instruction, or with intent to damage or destroy the premises of the University of Toronto or damage, destroy or steal any property on the premises of the University of Toronto that is not her or his own, or without just cause knowingly enter or remain in or on any such premises.

5. **Unauthorized Use of University Facilities, Equipment or Services**
(a) No person shall knowingly use any facility, equipment or service of the University of Toronto contrary to the expressed instruction of a person or persons authorized to give such instruction, or without just cause.
(b) No person shall knowingly gain access to or use any University computing or internal or external communications facility to which legitimate authorization has not been granted. No person shall use any such facility for any commercial, disruptive or unauthorized purpose.
(c) No person shall knowingly mutilate, misplace, misfile, or render inoperable any stored information such as books, film, data files or programs from a library, computer or other information storage, processing or retrieval system.

6. **False charges**
No person shall knowingly or maliciously bring a false charge against any member of the University of Toronto under this *Code.*

7. **Aiding in the Commission of an Offence**
No person shall counsel, procure, conspire with or aid a person in the commission of an offence defined in this Code.

8. **Refusal to Comply with Sanctions**
No person found to have committed an offence under this Code shall refuse to comply with a sanction or sanctions imposed under the procedures of this *Code.*

9. **Unauthorized Possession or Use of Firearms or Ammunition**
No person other than a peace officer or a member of the Canadian Forces acting in the course of duty shall possess or use any firearm or ammunition on the premises of the University of Toronto without the permission of the officer of the University having authority to grant such permission.

Note: The President of the University or another senior officer designated by the President has been given the authority to grant such permission for the premises of the University of Toronto under the authority of the Governing Council of the University. The President has designated the Vice-President, Business Affairs, who is the Chief Administrative Officer of the University to exercise this authority. Various officers of institutions federated with the University of Toronto have authority to grant such permission with respect to the premises of the federated institutions.

[C.] Procedures

1. General
(a) The University shall establish a centrally appointed pool of trained Investigating and Hearing Officers, who shall be available to the divisions, at the discretion of the head of the division, if that is considered appropriate or preferable for any reason.
(b) Each division shall appoint an Investigating Officer and a Hearing Officer, who may be student, staff or faculty members from that division.
(c) Whether the incident is investigated locally or centrally, every effort shall be made to conclude the case through to delivery of a final decision within the University within one year from the alleged incident of misconduct.
(d) Pursuant to the provisions of Section D., interim conditions may be imposed by the head of the division.
(e) For the purposes of confidential and central record keeping, a one-page summary of the outcome of all investigations, whether or not they have proceeded to a Hearing, shall be copied to the Judicial Affairs Officer in the Office of the Governing Council.
(f) Whenever possible and appropriate, informal resolution and mediation shall be used to resolve issues of individual behaviour before resort is made to formal disciplinary procedures.

2. Specific
(a) An Investigating Officer shall be appointed for a term of up to three years by the principal, dean or director (hereinafter called “head) of each faculty, college

or school in which students are registered (hereinafter called "division"), after consultation with the elected student leader or leaders of the division, to investigate complaints made against student members of that division. Investigating Officers shall hold office until their successors are appointed.

(b) A Hearing Officer shall be appointed for a term of up to three years by the council of each division to decide on complaints under this Code made against student members of that division. Hearing Officers shall hold office until their successors are appointed.

(c) If the Investigating Officer is unable to conduct an investigation, or the Hearing Officer is unable to conduct a hearing, or where the head of the division believes on reasonable grounds that the appointed officer is inappropriate to conduct the particular investigation or chair a particular hearing, then the head of the division shall seek an appointment from the central pool for that particular case. If the head of the division intends to request either suspension from registration or expulsion from the University as a sanction in a particular case, or if the case appears to the head of the division to require a Hearing Officer with legal qualifications, then the Senior Chair of the University Tribunal may, on the application of the head of the division, appoint a legally qualified person as Hearing Officer for the particular case.

(d) Where the head of the division has reason to believe that a non-academic offence as defined in this *Code* may have been committed by a student member or members of the division, the Investigating Officer will conduct an investigation into the case. After having completed the investigation, the Investigating Officer shall report on the investigation to the head of the division. If the head of the division concludes, on the basis of this report, that the student or students may have committed an offence under the *Code of Student Conduct,* the head of the division shall have the discretion to request that a hearing take place to determine whether the student or students have committed the offence alleged.

(e) The hearing will be chaired by the Hearing Officer. The case will be presented by the Investigating Officer, who may be assisted and represented by legal counsel. If the right to a hearing is waived, or after a hearing, the Hearing Officer will rule on whether the student or students have committed the offence alleged and may impose one or more sanctions as listed below. The accused student or students may be assisted and represented by another person, who may be legal counsel.

(f) Appeals against decisions of bodies acting under authority from the council of a division to hear cases arising out of residence codes of behaviour may be made to the Hearing Officer of the division, where provision therefor has been made by the council of the division.

(g) Appeals against the decision of the Hearing Officer may be made to the Discipline Appeals Board of the Governing Council.

(h) Where the head of a division has reason to believe that a non-academic offence may have been committed by a group of students including students from that division and from another division or divisions, the head may consult with the head of the other division or divisions involved and may then agree that some or all of the cases will be investigated jointly by the Investigating Officers of the divisions of the students involved and that some or all of the cases will be heard together by the Hearing Officer of one of the divisions agreed upon by the heads and presented by one of the Investigating Officers agreed upon by the heads.

[D.] Interim Conditions and Measures

1. Interim Conditions: Ongoing Personal Safety

In those cases where the allegations of behaviour are serious and, if proven, could constitute a significant personal safety threat to other students or members of the University community, the head of the division is authorized to impose interim conditions that balance the need of complainants for safety with the requirement of fairness to the respondent student. The interim conditions are in no way to be construed as indicative of guilt, and shall remain in place until the charges are disposed of under the *Code's* procedures.

2. Interim Measures: Urgent Situations
In some circumstances, such as those involving serious threats or violent behaviour, it may be necessary to remove a student from the University. Where the head of the division has requested an investigation by the Investigating Officer and the investigation is pending, the Vice-President & Provost (or delegate) may, on the advice of the head of the division, suspend a student or students temporarily for up to three working days if, in the opinion of the Vice-president & Provost (or delegate), there is reasonable apprehension that the safety of others is endangered, damage to University property is likely to occur, or the continued presence of the student(s) would be disruptive to the legitimate operations of the University. The student(s) shall be informed immediately in writing of the reasons for the suspension and shall be afforded the opportunity to respond. Any such temporary suspension must be reviewed by the Vice-president & Provost (or delegate) within the three-day temporary suspension period, following a preliminary investigation, and either revoked or continued. If the suspension is continued, the student(s) may appeal to the Senior Chair (or delegate), or the Associate Chair (or delegate) of the University Tribunal, who shall hear and decide on the appeal within five days.

[E.] Sanctions

The following sanctions or combinations of them may be imposed upon students found to have committed an offence under this Code.

In addition, students found to have committed an offence may be placed on conduct probation for a period not to exceed one year, with the provision that one or more of the following sanctions will be applied if the conduct probation is violated.

1. Formal written reprimand.

2. Order for restitution, rectification or the payment of damages.

3. A fine or bond for good behaviour not to exceed $500.

5. Requirement of public service work not to exceed 25 hours.

5. Denial of access to specified services, activities or facilities of the University for a period of up to one year.

The following two sanctions, which would directly affect a student's registration in a program, may be imposed only where it has been determined that the offence committed is of such a serious nature that the student's continued registration threatens the academic function of the University of Toronto or of any of its divisions or the ability of other students to continue their programs of study. Where the sanction of suspension and/or expulsion has been imposed on a student, the Vice-president & Provost (or delegate) shall have the power to record that sanction on the student's academic record and transcript for such length of time as he or she considers appropriate.

A sanction of suspension shall be recorded on the student's academic record and transcript for a period of five years. The following wording shall be used: "Suspended from the University of Toronto for reasons of non-academic misconduct for a period of [length of suspension], [date]."

A sanction of expulsion shall be permanently recorded on a student's academic record and transcript. The following wording shall be used: "Expelled from the University of Toronto for reasons of non-academic misconduct, [date].''

6. Suspension from registration in any course or program of a division or any divisions for a period of up to one year.

7. Recommendation for expulsion from the University.

POLICY ON ACCESS TO STUDENT ACADEMIC RECORDS

The complete Policy on Access to Student Academic Records is available from the Office of the Coordinator of Student Services, School of Graduate Studies and on the University of Toronto Web site www.utoronto.ca/govcncl/pap/policies/access.html. Extracts from the Policy are provided below in ordinary type. References in square brackets are to original section numbering in the Policy.

[3.] Definition of the official student academic record
The official student academic record refers to information relating to a student's

admission to and academic performance at this University.

The "official student academic record" shall contain:

(a) (i) personal information which is required in the administration of official student academic records such as name, student number, citizenship, and social insurance number;

(ii) registration and enrolment information;

(iii) results for each course and academic period; and

(b) (i) narrative evaluations of a student's academic performance subsequent to his or her admission, used to judge his or her progress through an academic program;

(ii) basis for a student's admission such as the application for admission and supporting documents;

(iii) results of petitions and appeals filed by a student;

(iv) medical information relevant to a student's academic performance which has been furnished at the request or with the consent of the student concerned;

(v) letters of reference which may or may not have been provided on the understanding that they shall be maintained in confidence;

(vi) personal and biographical information such as address and telephone number.

The "official student academic record" shall be maintained by the University. For each type of information, academic divisions shall designate which document, form or medium contains the official version and how official copies of such information will be identified

[4.] Access to official student academic records

(a) Access by a student

(i) A student may examine and have copies made of his or her official student academic record defined in Section 3 above, with the exception of those portions of the record which comprise letters of reference (Section 3(b)(v)) which have been provided or obtained on the expressed or implied understanding that they shall be maintained in confidence. A student may, however, be advised of the identity of the authors of any confidential letters contained in his or her official academic record.

(ii) A student's request to examine a part of his or her official student academic record shall be made in writing and shall be complied with by the responsible authorities within a division. Such compliance shall occur within 30 days of receipt of the request, or within such lesser period as a division may determine.

(iii) A student has the right to challenge the accuracy of his or her official student academic record with the exception of the material specifically excluded in Section 4(a)(i) and to have his or her official student academic record supplemented with comments so long as the sources of such comments are identified and the official student academic record remains securely within the custody of the academic division. Reference to such comments does not appear on reports such as transcripts or statements of results.

(iv) It is assumed that all documents relating to petitions and appeals (Section 3(b)(iii)) and not provided on the understanding that they shall be maintained in confidence will be retained within a division, and when needed by a student, will be made freely available. In addition, The Statutory Powers Procedure Act, 1971 of Ontario requires that where the good character, propriety of conduct or competence of a party is in issue in any proceedings in a tribunal to which the Act applies (such as the Academic Appeals Committee of the Governing Council), the party is entitled to be furnished prior to the hearing with "reasonable information" of any allegations with respect thereto.

(b) Access by alumni and former students

(i) An alumnus or alumna or a former student may examine and have copies made of the portion of his or her official student academic record as defined in Section 3(a) above.

(ii) A request from an alumnus or alumna or a former student to examine the portion of the official student academic record as defined in Section 3(a) shall be made in writing and shall be complied with by the responsible authorities within a divi-

sion. Such compliance shall occur within 30 days of receipt of the request, or within such lesser period as a division may determine.

(iii) An alumnus or alumna or a former student shall have the right to challenge the accuracy of his or her official student academic record only under such terms and conditions as the academic division may determine and publish in the divisional calendar.

(c) Access by University staff and members of official University and divisional councils and standing committees

Members of the teaching and administrative staff of the University and members of official University and divisional councils and committees shall have access to relevant portions of an official student academic record for purposes related to the performance of their duties. A staff member requesting information must have a legitimate need to have the requested information for the effective functioning of the position or office. Access to medical information as defined in Section 3(b)(iv) shall be granted to members of the teaching and administrative staff only with the prior expressed or implied consent of the student and, if applicable, in the case of a medical assessment, the originator (physician, etc.) of such.

The Department of Alumni and Community Relations shall have access to appropriate personal information on students and alumni for the purpose of maintaining contact with alumni.

(d) Access by University campus organizations

Recognized campus organizations in the University of Toronto shall have access to the information referred to in Section 3(a)(ii) as well as to the sessional address and telephone number of students named by that organization for the legitimate internal use of that organization. The Students' Administrative Council, Graduate Students' Union, Association for Part-time Undergraduate Students, and The Newspaper shall be entitled to publish and distribute within the University community a University-wide directory of students (including undergraduate, graduate, full-time and part-time) giving the sessional address and telephone number of students as long as there is a realistic provision for students to decline to consent to the disclosure of that information.

Names and addresses of students will also be provided to recognized campus organizations for the purpose of distributing information when all of the following conditions are met:

- the name and address information is not released to a third party.
- the name and address information is not used for commercial purposes.
- the organization proposes to distribute information which, in the opinion of the Assistant Vice-president (Planning) and University Registrar, the University would be willing to distribute if reimbursed by the organization.
- the information to be distributed is intended to provide information about the University and is not primarily advertisements for non-University organizations.
- the campus organization agrees to use the name and address information only for the specific purpose for which it was provided.

(e) Access by others

(i) By the act of registration, a student gives implicit consent for a minimal amount of information to be made freely available to all enquirers: the academic division(s), degree program(s) and the session(s) in which a student is or has been registered, degree(s) received and date(s) of convocation.

(ii) Any other information contained in the official student academic record (including any comments generated under Section 4(a)(iii) but with the exception of the material specifically excluded in Section 4(a)(i)), shall be released to other persons and agencies only with the student's prior expressed written consent, or on the presentation of a court order, or in accordance with the requirements of professional licensing or certification bodies, of the Ministry of Colleges and Universities for an annual enrolment audit, or otherwise under compulsion of law. Requests granted to any persons or agencies outside the University for access to a student's academic record shall be kept on file within a division. The release of the information concerning alumni and former students contained in the portions of the academic record as defined in Section 3(a)(i) shall also be governed by the above provisions.

(iii) General statistical material drawn from academic records not disclosing the identities of students, alumni and former students may be released for research and informational purposes authorized by the University by the academic division maintaining these records.

(iv) in the event that a student, alumnus or alumna or a former student is deceased, the executors of his or her estate shall have access to the official student academic record under the same terms as would the individual if he or she were still living.

(f) Refusal of access
The University reserves the right to withhold access to the statements of results and transcripts of students, alumni and former students who have outstanding debts or obligations to the University in accordance with the Policy on Academic Sanctions for Students Who Have Outstanding University Obligations. The University may also choose not to release the official diploma to such persons nor to provide written or oral certifications of degree on their behalf.

[5.] Custody and retention of official student academic records

(a) Academic records of students are normally under the custodial responsibility of the academic division. Every academic division maintaining official student academic records shall draw up plans for the eventual disposition of their records in consultation with the University Archivist and in accordance with an approved records schedule which is in compliance with this policy.

(b) Those portions of the official student academic record as defined in Section 3(a) shall be maintained permanently. Each academic division's records schedule shall specify the document, form or medium in which these records will be maintained.

(c) Official student academic records preserved in the University Archives because of their archival value shall become open to researchers authorized by the University seventy-five years after a student has ceased to be registered.

[6.] The University's responsibilities with reference to the official academic records of students, alumni and former students

(a) Students shall be informed of University policy and divisional procedures with respect to their official student academic records.

(b) Academic divisions, administrative divisions which handle student academic records and campus organizations shall develop administrative procedures in support of this policy.

(c) Academic records shall be kept at all times under appropriate security.

[7.] Notwithstanding other provisions of the Policy on Access to Student Academic Records, for the sole purpose of administering drug and health insurance plans organized by the Students' Administrative Council, the association of Part-time Undergraduate Students, and the Graduate Students' Union, a list of the names, addresses, and student numbers of students in the relevant plan may be provided to the insurance company designated by the student organization. The terms and conditions under which the lists will be provided shall be satisfactory to the Vice-Provost, Students and shall be reflected in formal agreements which ensure that the information is adequately safeguarded and used only for the purpose for which it is provided. A similar list may be provided directly to the student organization under terms and conditions satisfactory to the Vice-Provost, Students, provided the Vice-Provost is satisfied that this is required for the administration of the plan.

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/govcncl/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 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

- acknowledges that it conducts its teaching, research and other activities in the context of a richly diverse society;
- recognizes that the attainment of excellence in pursuit of its mission is furthered by the contribution made by persons reflecting this rich diversity;
- 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;
- acts conscientiously in keeping with its own policies and existing legislation related to human rights, such as its *Code off Behaviour on Academic Matters, its Policies and Procedures: Sexual Harassment, its Employment Equity Policy and the Human Rights Code of the Province of Ontario.*

2

Degree Regulations

All degree candidates are accepted under the General Regulations of the School of Graduate Studies, as described in section 1, General Regulations.

In this section:

Introduction
Doctor of Philosophy (Ph.D.)
Doctor of Education (Ed.D.)
Master of Arts (M.A.)
Master of Science (M.Sc.)
Master of Applied Science (M.A.Sc.)
Master of Engineering (M.Eng.)
Master of Health Science (M.H.Sc.)
Master of Education (M.Ed.)

Degree regulations not found in this section appear in the SGS Calendar under Section 8, Graduate Programs and on the SGS Web site at www.sgs.utoronto.ca. Graduate unit entries are listed alphabetically with degree regulations appearing under the appropriate entry.

INTRODUCTION

Graduate Student Supervision

While the special, collaborative relationship between student and supervisor serves as a foundation for graduate education, particularly at the Ph.D. 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 Ph.D. Supervision'' (Endrenyi Report).

Although the report indicates procedures to be followed in the supervision of Ph.D. 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.cdcurrent/*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 Associate Dean of the Division.

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

Ph.D. 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 reporth/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

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. 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 Associate 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 Associate Dean or designate.

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 Ph.D. 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 Ph.D. programs within four years, they have been asked to include a statement to that effect in their calendar entries.

Admission Requirements

1 ***Four-Year Ph.D. Program***

Candidates 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 Ph.D. Program***

Candidates 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. Candidates who hold a master's degree in another discipline or require further preparation would also normally be admitted to this program.

Registration

1 A candidate for the degree of Doctor of Philosophy must be regularly registered in the School of Graduate Studies in accordance with the procedures of the General Regulations. Ph.D. 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 Ph.D. program.

Transfers

1 ***Master's to Ph.D.***

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

2 ***Ph.D. to Master's***

Candidates transferring from the Ph.D. 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 Associate 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 Ph.D. to the master's program will not be permitted to register subsequently in the Ph.D. program within the same graduate unit unless approved by the SGS Admissions and Programs Committee.

Program Requirements

1 ***Approval***

A candidate 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 candidate 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 candidate for the Ph.D. degree enrolled in a full-time (as opposed to a flexible-time) program will be denied further registration in that program and will have his or her candidacy 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 candidate has not completed all requirements for the degree exclusive of thesis research—including course requirements, language requirements, qualifying departmental examinations-or

b the candidate does not have an approved thesis topic, supervisor, or supervisory committee.

Note: Some graduate units require candidates to register in courses that run continuously throughout the program, e.g., ongoing research seminar courses. The foregoing time limit does not apply to such courses.

In exceptional circumstances, such a candidate 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.

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 Ph.D. 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. The hard copy of every thesis must be a printed or typed document in a standard form that can be easily microfilmed (see National Library guidelines referred to 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 Ph.D. program and within seven years for the five-year Ph.D. program.

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.

Ph.D. 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 reinstated 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 the SGS Admissions and Programs Committee. 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 Ph.D. Degree

Departments may develop, for approval, Ph.D. 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 Ph.D. 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 Ph.D. differs from the full-time Ph.D. 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 will be specified by the departmental regulations, but not less than six years regardless of the background of students at the time of their admission. Extensions are permitted under existing policy; students granted an extension may register full-time or part-time.

Transfers between the full-time Ph.D. program and the flexible-time Ph.D. 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 Associate Dean of their Division.

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 institute. 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 or video 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 Associate Dean 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 Associate Dean. 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 Council of the School of Graduate Studies and through it the University. It is therefore responsible for the standard of the Ph.D. 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 fulfil the requirements of the Ph.D. 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 Ph.D. 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 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 modification, 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.
16 The School requires that every Ph.D. thesis be published substantially as it is accepted as follows:
a After all the requirements for the degree have been met, the School will foward an original unbound copy of the thesis to University Microfilms Inc. (UMI), the National Library's microfilming agent, with the Non-exclusive Licence to Reproduce Theses Form, authorizing the National Library to reproduce, loan, distribute, or sell copies of the thesis in microform, paper, or electronic format. UMI will include the abstract in the listings of Dissertation Abstracts International. Titles published since 1997 are available in PDF digital format with 24-page previews. To offset the cost incurred by the National Library, UMI charges $37 per thesis, which is borne by the School.
b All theses copies must include an abstract. Most importantly, the technical requirements outlined in the guidelines for preparation of the abstract, (copies available in graduate units and the Ph.D. Examinations Office) must be followed in order for the abstract in the unbound copy to be reproduced in Dissertation Abstracts International.

The abstract in the final unbound copy of the thesis must be no longer than 350 words.

The National Library's Non-exclusive Licence to Reproduce Form must be signed and submitted to the Ph.D. Examinations Office when the final thesis is submitted. The National Library is prepared to allow a student to revoke the permission he or she has accorded to reproduce, loan, distribute, and sell copies of the thesis in the following situation: if a commercial publishing opportunity arises whereby the commercial publisher objects to the non-exclusive licence granted by the student to the National Library. In this case the National Library will request that UMI, after official notification by the student, withdraw the thesis in question from possible future sale and distribution. However, the thesis in microform format will remain in the National Library's collection and will continue to be made available for on-site consultation and for interlibrary loan.

Publication in microfilm satisfies the School's publication requirement but does not preclude publication of the thesis or any part of it in a journal or as a monograph. In this case, acknowledgment should be made that the work is part of a thesis at the University of Toronto.

If a thesis includes material from other previously copyrighted works, such as offprints of journal articles, maps, published texts, etc., written authorization from the copyright holder is required in order that they may be filmed. This authorization can be included in the author's acknowledgements or at the top of the actual document (or first page of a document more than one page in length).

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 by microfilm 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 Council of the School of Graduate Studies.

Copies of the thesis shall bear the words "Thesis submitted in conformity with the requirements for the Degree of Doctor of Philosophy, Graduate Department of (name of department) in the University of Toronto." In a prominent place on the title page of the thesis the international copyright notice should appear, which consists of three elements in the same line:
a the letter "C" enclosed in a circle
b the name of the copyright owner, in this case the author
c the year
For further details, students should consult the pamplet, Guidelines *for the Preparation of Theses for Microfilming and Binding.*

DOCTOR OF EDUCATION

The Ed.D. 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 M.Ed. or M.A. 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 candidate 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 candidates who have an M.Ed. or M.A. degree or the equivalent in the same area of specialization proposed at the doctoral level. Upon the recommendation of the home department, candidates beginning the degree program on a full-time basis can add prerequisite courses to their program. Otherwise, candidates must take prerequisite courses as “Special Students” at OISE/UT.
An eight half-course Ed.D. program should include at least four half-courses in the home department except as otherwise stated in departmental program descriptions.
4 Candidates 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 candidate 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 Candidates 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 candidate.
7 All requirements for the Ed.D. must be completed within six years of first enrolment as an Ed.D. candidate.

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 Candidates 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 candidate in this University shall pursue a program of advanced study approved by the graduate unit.
2 All requirements for the degree of M.A. 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 candidates 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 M.A.Sc. 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 Ph.D. degree.

Admission Requirements
1 Candidates are admitted under the general regulations.
2 Candidates 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 candidate by the graduate unit concerned.

A candidate 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 candidate in this University shall pursue a program of advanced study approved by the graduate unit. Normally the program shall include not more than three full-year courses or equivalent and the preparation of a research thesis, the latter being the major requirement.
2 The minimum residence requirement for the degree is two sessions (eight months), and the requirements for the degree must be completed within three calendar years.

MASTER OF ENGINEERING

The M.Eng. degree is intended primarily for those who wish to pursue advanced study at the master's level which is especially suited for professional practice.

Admission Requirements
1 Candidates are admitted under the general regulations.
2 Candidates 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 candidate by the graduate unit concerned.

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

Program of Study
1 Under the direction of one graduate unit, a candidate 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 candidate'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
- 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 Candidates 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 candidate 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 **M.Ed.** degree are as follows:

1 Under the direction of one graduate unit, a candidate undertakes one of three options to complete the program.

Option I - Course Work Plus Comprehensive

Ten half-courses plus a comprehensive **examination/requirement.**

Option II - Research Project

Eight half-courses plus a research project or a Major Research Paper.

Option III - Thesis

Six half-courses plus a thesis.

Option IV - Course Work Only

Ten half-courses.

The M.Ed. 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.

3

Fees

Schedule of Fees
The annual Schedule of Fees, updated each year in June, is available on the Web 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 full-time registration, specified on the offer of admission. This period establishes the minimum degree fee that must be paid before graduation.

In some masters' programs where sufficient course credits have been accumulated in a previous program, either here or at another university, a one-session fee may be waived.

In those departments where there is no residence or full-time attendance required and the degree is achieved by course work only, the length of program will be determined by the

number of half-courses (or equivalent full courses) required to complete the degree requirements. For example, for the M.B.A. degree:
Up to 12 half-courses is equivalent to a 1-year program.
13-17 half-courses is equivalent to a 1½-year program.
18-24 half-courses is equivalent to a 2-year program.

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 Ph.D. degree, and pay only the appropriate Ph.D. 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 27, 2006 are required to register for the Fall Session and pay the appropriate fees.

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 mailed in February. 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.utorontoxa.

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 $6.00 each, plus any necessary postage charges. Details and an order form are available at www.sgs.utoronto.ca.

4

Financial Support and Exchange Programs

In this section:

Awards Offered by the University
Awards in the Humanities and Social Sciences
Awards in the Mathematical, Physical, Biological and Applied Sciences
Fellowships Awarded by Government Agencies
Fellowships Awarded by Other Outside Agencies
Loans, Grants, and Other Bursaries
Teaching and Research Assistantships
Student Exchange Programs

Guaranteed Funding for Doctoral Students
Financial support for graduate students is important to the University of Toronto. For this reason, the university took a major step in the year 2000 towards committing funding of at least $12,000 plus tuition and fees to eligible doctoral-stream students.

U of T is the first Canadian University to offer a guaranteed level of financial support for graduate students pursuing doctoral degrees. The funding will be available for up to five years of study and will help put eligible graduate students at U of T on a more equal footing with their counterparts in the United States.

The funding package can be made up from a variety of sources including:

- external awards
- internal awards
- research assistantships
- teaching assistantships

Loans are not included in the guarantee, and departments with more resources, such as lab-intensive science programs, are able to offer packages well above the guaranteed minimum.

Contact your graduate unit for more details.

Note to OISE/UT students:
OISE/UT students are covered under the Memorandum of Agreement between the University of Toronto and the Ontario Institute for Studies in Education. OISE/UT has a similar arrangement for guaranteed funding for Ph.D. students. Students are advised to consult with the Student Services Office at OIES/UT regarding available financial support and award application.

1. AWARDS OFFERED BY THE UNIVERSITY

General University of Toronto Graduate Awards Policy
Each graduate unit will establish an Awards Committee, consisting of at least three members of the graduate faculty of that unit, to adopt an Awards Policy that is fair and transparent for the students in that unit. The Awards Committee will oversee the implementation of the policy and approve any subsequent changes to it.

Although SGS encourages graduate units to tailor their Awards Policy to their own circumstances and needs, the policy must meet certain minimum conditions and requirements, as specified by SGS.

The Awards Policy of a graduate unit will specify the conditions of eligibility for holding an award in that graduate unit; these conditions may exceed the minimum conditions provided by SGS. The policy should also provide infor-

mation regarding the various sources of financial support available for students in that unit (e.g., teaching assistantships and research assistantships as well as fellowships); the manner in which support is distributed; the level and duration of support students can expect; and the conditions for renewal of support from year to year.

Graduate units will make their current Awards Policy available to all students in the unit and will ensure that the Fellowships and Loans Office of SGS has a copy of their current Awards Policy.

Eligibility and Application

Application dates and information correct at time of printing.

Currently registered graduate students do not need to complete a separate award application (unless stated in the award description).

Persons not currently University of Toronto graduate students, as well as registered graduate students intending to proceed to a different graduate degree in the following session, are encouraged to submit an application for admission by a deadline set by your graduate unit.

Candidates submitting admission applications by the deadline are automatically considered for fellowships awarded by the University. No separate award application is required (unless stated in the award description).

However, graduate students are advised to check with their graduate units for more information on the availability of awards, deadlines, and eligibility.

Value

See individual award descriptions. Since the value of an endowed award is dependent on the actual income of the fund, it is possible that the amount of the award at the time of payment may be different than that stated in this calendar or other appropriate committees.

Where the amount of the award is not payable from income earned on an endowed fund, payment will be dependent on the receipt of the amount of the annual award from the donor. An award does not include academic fees unless stated.

Terms

Nominations for these awards are made by the graduate units; decisions are made by the Fellowships Committee of the School of Graduate Studies or other appropriate committees.

Formal notification of awards is sent to successful applicants starting on or about April 1.

Fellowships are normally paid in one, two, or three instalments (depending on the tenure); the normal times are early September, mid to late January, and mid to late May. Award holders must be registered as full-time graduate degree students before cheques are issued.

A fellowship may be held with a University of Toronto teaching or research assistantship.

In accordance with Section 56 of the Canadian Income Tax Act, award income is taxable. Accordingly, a Canadian Income Tax Return must be filed on or before April 30 of the year following the receipt of the award.

The School of Graduate Studies reserves the right not to award any of the fellowships listed below in any year. Additional terms and conditions may apply for these fellowships.

University of Toronto Fellowships (UTF)

Eligibility Requirements

There is no eligibility restriction based on citizenship or status in Canada for the University of Toronto Fellowship (UTF).

Students registered in a master's program beyond the second year are not eligible to hold a UTF. Students admitted to the Ph.D. program on the basis of a bachelor's degree are not eligible to hold the fellowship beyond year six. Students admitted to the Ph.D. program on the basis of a master's degree are not eligible to hold a UTF beyond year five. Students may hold a UTF for a maximum of six years.

New students must have at least a B+ average grade in the final year of study in the degree program that is the basis of their admission to their graduate program at the University of Toronto.

Current graduate students must maintain good standing in their program (Le., must complete the various requirements for their degree program in a satisfactory and timely manner) as determined by the graduate unit's time line for completion of the degree.

Students in the third year or higher of their doctoral program must have met with their Ph.D. Supervisory Committee within the last 12 months or sooner if required to do so by the graduate unit. The report of the Supervisory Committee must indicate that the student is making satisfactory progress towards the degree.

Terms of University of Toronto Fellowship A wards

Students must be registered as full-time degree candidates in order to hold a U of T Graduate Fellowship. They must be in full-time attendance for a minimum of 14 weeks in any session dur-

ing which they hold awards. Except for absences necessary for research purposes, as approved by their graduate unit, they must reside in such geographical proximity as to be able to participate fully in their graduate unit's activities during that session. Students who are not in full-time attendance (except for approved absences for research purposes) for at least 14 weeks in a session will be required to repay the award.

Where programs exist that can be pursued on a part-time or full-time basis, graduate students with a disability that prevents them from enrolling on a full-time basis may, under certain circumstances, be considered for a University of Toronto Graduate Fellowship on the basis of academic merit. For this purpose, disability is defined under the Human Rights Code, Chapter 53, Section 9 (1)(b). To be eligible, a student must provide his or her graduate unit with a letter from the University's Director of Special Services to Persons with a Disability confirming that part-time study is, in effect, full-time study for that student.

Students dually registered in the third year of a master's program and first year of a Ph.D. must complete the requirements of the master's program before the end of the session of dual registration in order to retain their doctoral fellowships; if they fail to complete the master's program by this deadline, they will be required to repay the award.

Ontario Student Opportunity Trust Fund (OSOTF)

The University has established a number of endowed awards through the Ontario Student Opportunity Trust Fund program. Under the program every donated dollar is matched on a dollar-for-dollar basis by both the Government of Ontario and the University of Toronto. In accordance with the guidelines provided by the provincial government, the OSOTF awards must be given to Ontario residents on the basis of financial need as a primary selection criterion. Many of these OSOTF awards also have additional selection criteria, such as academic merit.

The OSOTF awards are identified below in boldface following the description. Whether explicitly stated in the description below or not, applicants must demonstrate financial need by completing a U **of T financial needs assessment form** available from the graduate units and the SGS Fellowships and Loans Office.

Ontario Graduate Scholarships

The Government of the Province of Ontario provides 2,000 graduate scholarships tenable at Ontario universities. Each scholarship is valued at $15,000 for a three-session academic year or $10,000 for two sessions. The Province of Ontario contributes two-thirds and the student's university provides one-third. U of T has established a number of endowment funds to contribute its one-third portion of the OGS awards won by U of T students. A detailed description of the OGS program and application procedures can be found under Fellowships Awarded by Government Agencies. For the humanities and social sciences, the University has matched endowment donations on a dollar-for-dollar basis. The following are the endowed OGS awards established to date:

Faculty of Applied Science and Engineering

H. Brian White/OGS in Civil Engineering
iTrans/OGS in Civil Engineering
Leslie and Lois Shaw/OGS in Chemical Engineering (2)
Leslie and Lois Shaw/OGS in Mechanical and Industrial Engineering (2)
PCL/OGS in Civil Engineering
Seong Lim Gooi/OGS in Biomedical Engineering
Ted Rogers/OGS in Electrical and Computer Engineering (20)

Faculty of Architecture, Landscape and Design

C. H. Lee/OGS
Charles and Doreen Lloyd-Duerdoth/OGS
Cho Family/OGS
Diamond & Schitt Architects Incorporated/OGS
George B. P Farrow/OGS
Howard Cohen and Ron Soskolne/OGS
Kuwabara Payne McKenna Blumberg Architects/OGS
Larry Wayne Richards/OGS
Matthews Family/OGS
Minto Foundation/OGS
Pierre Paul Childs, AIA, ACIP/OGS

Faculty of Arts and Science

A. G. Rigg/OGS in Medieval Studies
Arthur Child/OGS in Economics (2)
Arthur Child/OGS in History (2)
Associates of the University of Toronto/OGS in History or Political Science
Brent Buckner and Peter Dungan/OGS in the Department of Economics
Chikai and Sawa Hiraki Japanese Canadian Buddhist/OGS in East Asian Studies
Christopher (Chris) Wallis/OGS in the Department of English
Chuk Ping Ho and Chiu Wing Ng/OGS in East Asian Studies
Desmond and Marjorie Gourley/OGS in Zoology

Donald F. Putnam and George Tatham/OGS in Geography
Dorothy Louise Ellison, 4T8/OGS in Classics
Dorothy Louise Ellison, 4T8/OGS in English
Dr. F. M. Hill/OGS in Public Policy
Dr. Jay Alan Smith/OGS in Philosophy
Dr. Ranbir Singh Khanna/OGS in Canadian Studies
Dr. Ranbir Singh Khanna/OGS in the Environment
Edie Yolles/OGS in the Department of Sociology
Edward N. Burstynsky/OGS in Linguistics
Edward Sorbara/Urban Development Institute of Toronto/OGS in Geography/Program in Planning
Eva Klein and Leonard Waverman/OGS
Francesco Camisso/OGS in Italian Studies
Frank Peers/OGS in Political Science
Gordon Russell and Beatrice Bott Dow/OGS in English
Hain/OGS in Philosophy (2)
Hubert Richmond Kemp/OGS in Economics
J. M. Tomczak/OGS in Geography
J. Warren Flanagan/OGS in Chemistry
Jeffrey S. Friedland/OGS in Anthropology
John R. Levitt/OGS in Mathematics
Leon Lee On Wong and Susan Foon Chim Wong/OGS in Economics
Leontine Amant Ebers/OGS in Fine Art
Lorie Waisberg/OGS in Comparative Literature
Lupina Foundation/OGS (6)
Margaret Higgins Memorial/OGS in the Humanities and Social Sciences
Michael Ralph Walsh/OGS in Geography
Nai'm S. Mahlab/OGS in Jewish Studies (2)
Neptis Foundation/dOGS in Geography (2)
OGS in Canadian Studies
Paul Fox/OGS in Political Science
Peter Russell/OGS in Political Science
Professors/OGS in the Department of Political Science
Provost/OGS in the Humanities and Social Sciences (10)
Rene Efrain Memorial/OGS in Classics
Rene Efrain Memorial/OGS in History
Robert and Jacqueline White/OGS in Fine Art
Ruth and Harry Carter/OGS in the Environment (3)
Ruth and Harry Carter/OGS in the Humanities and Social Sciences (2)
Stefan Dupré/OGS in Political Science
Ted Hodgetts/OGS in Political Science
Ted Mossman/OGS in Mathematics
Thomas and Beverley Simpson/OGS (14)
Toronto Star/OGS in English
U of T Planning Alumni/OGS
University of Toronto Foundation/OGS (3)
Urban Strategies/OGS in Geography/Program in Planning
Venerable Bede/OGS in Medieval Studies
Vonda McCrae Clarke Memorial/OGS in Anthropology
Walter and Anne White/OGS in Physics

Faculty of Dentistry
Javenthy Soobiah/OGS (3)
Wilson G. Harron/OGS (3)

Faculty of Forestry
Adam Zimmerman/OGS
Dean Gordon Cosens/OGS (2)
Forest Soil/OGS
Hoshwati Yadav/OGS

Faculty of Information Studies
75th Anniversary/OGS
Allan and Jean Howarth/OGS
McLuhan-de Kerkhove-Paine/OGS
Shirley C. & George W. Spragge/OGS

Faculty of Law
Bernard Chernos/OGS

Faculty of Medicine
Bertha Rosenstadt/OGS (15)
Department of Health Policy, Management and Evaluation/OGS
Dorothy Sterling Dow Walsh/OGS in Biochemistry
Dr. Edward Fidlar/OGS in Physiology (6)
Dr. Ivan L. Silver/OGS in Mental Health
Hazel Jeanne Watson/OGS (8)
Leon Lee On Wong and Susan Foon Chim Wong/OGS in Public Health Sciences
Merrijoy Kelner/OGS in Public Health Sciences
National Institute of Nutrition/OGS in Nutritional Sciences

Faculty of Music
Gwendolen M. Grant/OGS
Ing. Prof. Frantisek Scheybal/OGS
Rose Montpetit-Dilley/OGS

Faculty of Nursing
Dr. Gail Donner/OGS
Dorothy Riddel/OGS (3)
M. Jean Wilson/OGS
Ruth Amiel Gallop/OGS

Faculty of Physical Education and Health
B. Evans and J. Daniel/OGS
Bertha Rosenstadt/OGS (2)
Margaret Eaton/OGS
Roy Sheppard/OGS

Faculty of Social Work
Bertha Rosenstadt/OGS (16)
Buddha's Light International Association/OGS
E.A.G. Memorial/OGS
Eva B.C. Li/OGS (2)
Grace Yun King Chum/OGS
Dr. Albert Rose/OGS
Dr. Annie Wong/OGS
Dr. Shari Graham FelVOGS
Margaret Casella/Lily Rebic/OGS
Mr. and Mrs. Li Shun Xing/OGS
Professor Chick Hendry/OGS
Sharon and Larry Enkin/OGS
Wes Shera/OGS

Joseph L. Rotman School of Management
Bill Reddin Managerial Effectiveness/OGS
Fidelity Investments Canada/OGS
J. Murray Armitage/OGS (4)
HSBC Bank Canada/OGS (2)
Larry Wasser/OGS (2)
Home Capital/OGS in Honour of John J. Ruffo
Martin Evans/OGS
Peter F. Drucker Effective Executive/OGS
Peter J. Irvine/OGS

Leslie Dan faculty of Pharmacy
Bertha Rosenstadt/VOGS (2)
Patheon Inc./OGS
Shoppers Drug Mart/OGS (3)

Ontario Institute for Studies in Education of the University of Toronto
Cicely Watson/OGS
Eureka!/OGS (4)
Evan and Helen Lewis/OGS (2)
Frank and Amelia Brierley/OGS
Janet E. Waite/OGS (5)
Marisa Sorbara/OGS in Child Studies, Human Development and Applied Psychology
Mellon Foundation/OGS
OISE Faculty Association/OGS
OISE/UT/OGS (3)
Power Corporation of Canada/OGS (2)

School of Graduate Studies Centres and Institutes
Anthony Doob/OGS in Criminology
Bob Mackenzie/OGS in Industrial Relations
FESNFAIS OGS in Industrial Relations
Lancaster House/OGS in Industrial Relations
Metal-Trebbin-De Boni/OGS in Drama
MIR 25th Anniversary/OGS in Industrial Relations
Provost's/OGS in the Humanities and Social Sciences at SGS

University of Toronto at Mississauga
AstraZeneca Canada Inc./OGS in Biotechnology

Connaught Scholarships
Approximately 25 entrance scholarships are awarded to full-time graduate students with outstanding records who are entering a research-oriented graduate degree program. Open equally to all disciplines. No special application required. Students are automatically considered when they apply for admission to a graduate unit. Value: $15,000 plus full tuition fees.

SGS Post Doctoral Fellowships
The program is designed to encourage students' timely progress through Ph.D. programs in the Humanities and Social Sciences, develop their teaching skills and get their dissertations into published form, enhancing their position in the job market.

Up to 6 fellowships are awarded each year. Each Fellowship is worth $16,000.

To be eligible to hold the award, students must have completed their Ph.D. dissertations within four years of first registration for the Ph.D. degree (five years for those who entered the doctoral program straight from the bachelor's). Applicants must have submitted their dissertation and scheduled a final oral examination by August 31. The whole examination process should be completed before October 30. The candidates for this fellowship must also apply for a SSHRC postdoctoral fellowship.

Successful candidates will be expected to teach an undergraduate half-course under supervision in the general area of their dissertation. Such courses should be additional to the unit's normal offerings.

Recipients are selected by the School from nominations submitted by the graduate department. Awards are announced to the department in late fall. Consult your department for details.

Eleanor Cate Allen Fellowship
Awarded on the basis of academic merit to a full-time degree student registered in the School of Graduate Studies. No application required. Value: to be determined.

Joseph Bazylewicz Fellowships
Awarded on the basis of financial need to students with Polish citizenship in any program at the University of Toronto. Interested students should submit an SGS Bursary Application, a letter of recommendation from a faculty member familiar with their work, and a copy of Polish citizenship to the Fellowships and Loans Office. Deadline: end of April. Value: annual income.

Mary H. Beatty Fellowships
Awarded to outstanding new students as a top-up award to NSERC, SSHRC or CIHR doctoral award. Value in 2005-2006: $5,000.

Bell University Scholarship at the University of Toronto
Awarded to graduate students in any master's or doctoral degree program conducting research under the direction of currently funded Bell University Labs Principal Investigators. Apply to the Fellowships and Loans Office in spring.
OSOTF

George Sidney Brett Memorial Fellowship
Awarded on the basis of academic merit. No application required. Value: to be determined.

Andrea and Charles Bronfman Student Awards in Israeli Studies
Awarded by Admissions and Awards to undergraduate and/or graduate students to fund a period of research or study in Israel. Financial need and academic merit may also be considered. Value: annual income of fund.
OSOTF

Evelyn Catherall Scholarship
Awarded to Junior Fellows of Massey College to provide assistance in presenting a colloquium or conference paper. Financial need and academic merit will also be considered. Apply to Massey College. Value: annual income.
OSOTF

Sir Joseph Flavelle Fellowship
Awarded on the basis of academic merit. No application required. Value: to be determined.

Margaret and Nicholas Fodor Fellowship
Awarded to a full-time graduate student who is a Canadian citizen or permanent resident, on the basis of academic merit. Preference given to candidates who choose to pursue graduate studies at the University of Toronto rather than at an American institution, if financial assistance were available.

Hydrogen Systems Graduate Scholarships in Engineering and the Humanities and Social Sciences
Awarded annually to doctoral stream students as follows: two awards to graduate students registered in the Department of Mechanical and Industrial Engineering, one award to a student registered in the Faculty of Applied Science and Engineering, and one award to a student registered in the Humanities or Social Sciences within the broader Hydrogen economy anticipated in the future. Open to both domestic and international students and previous recipients of this award. Value: four awards of approximately $16,200 each.

The Agnes M. Ireland Award
Awarded to female student(s) after completing the final year in an honour's program in the Faculty of Arts and Science or the final year in the Faculty of Medicine at the University of Toronto. Must begin a graduate degree program in the School of Graduate Studies within one year of completing undergraduate studies. Awarded to the student(s) who displays an all-round competence (academic and extracurricular activities). Applicants must submit an OSOTF needs assessment form, a statement outlining her plan of study, a letter of recommendation from a faculty member, transcripts, and a C.V. to SGS Fellowships and Loans Office. Deadline: end of April.
OSOTF

Iter Fellowship in the Faculty of Arts and Science
Awarded to graduate students in the Faculty of Arts and Science. No application required.

Oriana Josseau Kalant Memorial Award
Awarded on the recommendation of the Collaborative Program in Addiction Studies (COPAS) to a student enrolled in the Collaborative Program. Applicants must meet the following eligibility conditions:
1. apply in the spring session immediately following the fall session in which the COPAS core course PAS 3700 ***Multidisciplinary Aspects of Addictions*** was taken for credit,
2. submit one of the assignments completed for course credit in PAS 3700 to the award selection committee,
3. this assignment must be accompanied by a letter of application outlining the reasons for enrolling in the COPAS program and future career plans,
4. at the time of application, students must be in good standing in their home department.

Apply to the COPAS program by January 31. Value: annual income.

Kwok Sau Po Scholarship
Awarded on the basis of academic merit to an international student from Hong Kong/China enrolled in any full-time program.

Ranjit Kumar Graduate Fellowship
Awarded to a doctoral-stream student, with primary preference for candidates working in a

subject area in which the donor, Foundation for International Training (www.ffit.org), has ongoing projects, and secondary preference for students working in a geographical area in which the donor has ongoing projects. Application required.

Mary Elizabeth Mahony Fellowship
This award is open to a male student who, at graduation, was registered in University College in the University of Toronto. Value: approximately $2,000.

Massey College Graduate Fellowships
Awarded to students studying at Massey College on the basis of financial need and academic merit.
OSOTF

Donald Matheson Springer Fellowship
Awarded to a University of Toronto graduate pursuing graduate studies at the University of Michigan. Apply by letter, including up-to-date transcripts and a letter of recommendation from a faculty member familiar with the student. Deadline: late April. Approximate value: $6,500 CDN.

The McCuaig–Throop Bursary
Through a bequest by the late Edith M. McCuaig, a fund provides bursaries for students registered full-time in a graduate degree program. The annual income from the estate is used to assist students on the basis of academic performance who require financial assistance, with preference given to students from the districts of Temiskaming, Cochrane, and Nipissing in Northeastern Ontario.

Scace Graduate Fellowship
Awarded on the basis of financial need and academic merit to deserving students from South Africa or the United Kingdom who want to pursue graduate studies at the University of Toronto. Recipients must be enrolled in a full-time graduate degree program. The award may be held for a maximum of four years, but is limited to a maximum of two years at the master's level. Application required or candidates must be identified as having financial need, based on the University's criteria. Value: annual income.
OSOTF

Adel S. Sedra Distinguished Graduate Award
Awarded to a graduate student who demonstrates outstanding academic and extra-curricular leadership. At the time of nomination, candidates must be registered and be in good standing in the second or third year of a doctoral program at the University of Toronto. Deadline: November 29. Value: $25,000.

Sperrin Chant Mesonic Award in Toxicology
Awarded to graduate students in the Institute for Environmental Studies based on financial need. Academic excellence and the character of applicants is also considered. Applications required or recipients must have been identified as having financial need based on the University's criteria. Value: annual income.
OSOTF

3M Canada Incorporated Scholarship
One award of $1,000 is available to a student entering a graduate program in the Joseph L. Rotman School of Management or the Faculty of Arts and Science who has maintained grades in the top quartile of the program and needs financial assistance. Application is by way of nomination by the graduate unit. Deadline: end of April.

Travel Grant for Graduate Research or Study in Israel
Through generous donations from Canadian Friends of the Hebrew University, a travel grant has been established to assist doctoral or master's students to conduct research or study in Israel. Applications available in early spring at the Fellowships and Loans Office.
OSOTF

The UTFA Al Miller Memorial Award
Awarded to graduate students based on financial need and academic merit. Applications available in spring at the Fellowships and Loans Office. Deadline: August 15.
OSOTF

Vivekananda Graduate Prize
Awarded on the basis of financial need to the graduate student who best exemplifies Vivekananda's ideal of education. Applicant's record of academic performance will also be considered. Application is by way of nomination by the graduate unit and must include a statement from the applicant, a letter of recommendation, transcripts, and an OSOTF needs assessment form completed by the nominee. Deadline: end of April. Value: approximately $1,000.
OSOTF

Frank M. Waddell Scholarships
Scholarships are open to students from Brant County, Ontario, and are awarded on the basis of academic merit to new or continuing graduate students. Apply by April 30 to Admissions and Awards, 315 Bloor Street West, Toronto, Ontario, M5S 1A1.

AWARDS IN THE HUMANITIES AND SOCIAL SCIENCES

The 1971 School of Library Science Scholars hip
Awarded annually to a student in the first year of the M.I.St. program with high academic standing. Value: income from the fund.

ARMA Toronto Chapter Award
Awarded to a full-time student with the highest academic standing in a Records Management course.

Albert S. Abel Memorial Award
Awarded on the basis of scholarship and financial need to a graduate student or students in the Faculty of Law.

Scholarships in Aboriginal Health
Awarded to Aboriginal students, including Status, Non-Status, Metis, and Inuit students, enrolled in graduate programs at the master's or doctoral level and second-entry programs. All Aboriginal students in these programs (full-time and part-time) are eligible to apply, with preference given to students demonstrating financial need. Eligible students should submit a letter of application listing their estimated costs and source/s of funding to First Nations House, Office of Aboriginal Services and Programs, 563 Spadina Avenue, Toronto, Ontario, M5S 1A1 by April 30. Telephone (416) 978-8227 or 978-7960.

Mildred Adams Memorial Scholarship
Awarded to a first year student with financial need to supplement tuition in the Faculty of Information Studies. Apply to the Faculty of Information Studies. Value: annual income.
OSOTF

Elisabeth Alfoldi-Rosenbaum Memorial Award
Awarded to any graduate student at the University of Toronto with a demonstrated interest in the areas of Professor Alfoldi-Rosenbaum's specialization, the Hellenistic through Early Byzantine periods (approximately 300 B.C.-700 A.D.). Financial need and academic merit are also considered. Value: annual income.
OSOTF

The Graduate Alpar Grant
Alumni and friends of the Department of Geography have established a grant available to a graduate student registered in the Department of Geography and the Program in Planning who is making good progress toward the completion of degree requirements. Apply to the Department of Geography. Value: one or more awards to the value of annual income.
OSOTF

Alpar (Graduate) Scholarship
Friends and alumni of the Department of Geography have endowed funds to provide an annual scholarship to a graduate student in the department who is making good progress towards completing degree requirements and has exhausted all other funding sources. The award was established in honour of Mrs. Zehra Alpar, an administrative staff member in the Department of Geography for over 25 years.

Alumni Entrance Fellowship
Awarded on the basis of financial need to the most outstanding and desirable applicants of the Rotman School of Management's M.B.A. program. Academic background and work experience will also be considered. Value: annual income.
OSOTF

John G. Anderson Memorial Bursary
Family and colleagues of the late John G. Anderson have donated funds for award to a student in the Faculty of Social Work. Value: annual income.

Mary and Louis Anisman Fellowship
For a graduate student who intends to write a master's or doctoral thesis on an aspect of the relationship of notions of fairness to law and its development, with emphasis on the intersection of law and morality. Value: annual income.
OSOTF

Jeanne Anson-Cartwright Memorial Graduate Fellowship in Music Theory or History
Awarded to an outstanding graduate student in the Music History or Music Theory program. Apply to the Faculty of Music. Value: annual income.

David and Ruth Archibald Bursary Fund
Awarded annually to a registered M.S.W. or Ph.D. student on the basis of financial need and high academic standing. The bursary is made possible through the generous support of Dr. David Archibald, the founder and CEO of the Addiction Research Foundation and recipient of the Order of Canada. Apply to the Faculty of Social Work. Value: $1,000.

Faculty of Architecture, Landscape, and Design Admission Scholarships
Awarded to students applying to the Master of Architecture program on the basis of ranked submission to the Admissions Committee. Minimum $500 each. Total awards will not exceed $2,500. Application not required.

Faculty of Architecture, Landscape, and Design Award
Awarded to students completing the first year of the Master of Architecture program who achieve overall excellence and exhibit potential for leadership in the field. Three awards in the amount of $1,000 each.

Faculty of Architecture, Landscape, and Design Award for Excellence in Visual Communication
Awarded to a student completing the first year of the Master of Architecture program who has demonstrated excellence in three-dimensional visual communication. Value: annual income (approximately $500).

Faculty of Architecture, Landscape, and Design Fellowship in Landscape Architecture
Awarded, on the basis of academic excellence and financial need, to a student completing the first year of the Master of Landscape Architecture program.

Faculty of Architecture, Landscape, and Design Scholarship in Landscape Architecture
Awarded to a student concluding the first year of the Master of Landscape Architecture program, based on academic excellence and financial need.

Barry Lorne Ardiel Scholarship
Awarded to a student completing the second year of the Master of Landscape Architecture program who exhibits the highest scholastic achievement during that academic session. Application not required. Value: annual income.

Jeanne Armour Award in Canadian History
Awarded to a graduate student undertaking a course of study related to Canadian History. Financial need must be considered, academic merit may also be considered.
OSOTF

The Art History Graduate Scholarship Fund
Various donors have established a fund to be awarded to graduate students in the Department of History of Art on the basis of financial need. Academic merit will also be considered. On the recommendation of the Department Chair, in any given year the award may be restricted for travel support. Apply to the Chair of the Department of Fine Art.
OSOTF

Eric Ross Arthur Scholarship
Awarded to a student who has the highest academic standing in third year of the Master of Architecture program.

Associate Dean's Award (E.M.B.A.)
Awarded to an exceptional student entering the Executive M.B.A. program who has achieved academic excellence at the graduate level. Direct inquiries to the E.M.B.A. program. Value: $10,000.

Associates of the University of Toronto Travel Award
Awarded on the basis of financial need to doctoral students in the humanities for research or study outside Canada. Academic merit will also be considered.
OSOTF

Association of Architects Scholarship
One scholarship awarded each to a student completing the second year and third year of the Master of Architecture program.

Marija Aukstaite Bursary
Candidates must be fluent in the Lithuanian language. Awarded on the merits of a research proposal which aims to contribute to the understanding and evaluation of the works of the poet Marija Aukstaite.

Marija Aukstaite Graduate Student Award
Awarded to graduate students whose projects relate to Lithuania in whole or in part. Application available from the Centre for Russian and East European Studies. Value: annual income.

Marija Aukstaite Scholars Award
Awarded to:
1. scholars or graduate students at the University of Toronto in any capacity for research expenses for projects relating to the study of Lithuanian, or
2. to scholars or graduate students from Lithuania in any field of the humanities and social sciences for research at the University of Toronto, or
3. to scholars from any country studying the life and works of poet Marija Aukstaite for visits to the University of Toronto. Preference will be given to those studying Marija Aukstaite.

Value: annual donations of approximately $2,000-$2,500.

Avenor Graduate Award
Avenor Inc., an international forest products company, has endowed funds to provide a scholarship to one or more full-time graduate students at the Centre for Industrial Relations. Value: approximately $4,000.
OSOTF

The Donald K. Aynsley Scholarship
This scholarship was established by the Ontario Labour Relations Board. It is a tribute to Donald Aynsley's years of service to the labour community as the former Registrar of the Board. The scholarship will be awarded on the basis of academic performance and financial need to a full-time graduate student enrolled at the Centre for Industrial Relations. Value: income.

Shane Baghai Fellowship in English Literature
Awarded on the basis of financial need and academic merit to a graduate student in one of the following areas: Centre for Comparative Literature, Centre for Study of Drama, Department of English, or the Centre for Medieval Studies. Applicant must provide a one- to two-page plan of study, a letter of recommendation, transcripts, and an OSOTF financial needs assessment form to SGS. Deadline: end of April. Approximate value: $10,000.
OSOTF

John D. Barnes Geodetic Sciences Fellowship
Mrs. Odette Barnes has endowed a fund, the income of which provides an award to a University of Toronto graduate who has completed the Geomatics/Land Information Systems program at Erindale College, with a grade average of at least B+ in the final year of full-time undergraduate study. The candidate must be entering the first year of full-time graduate studies in Geomatics/Land Information Systems at U of T.

Winifred G. Barnstead Scholarship
Awarded annually to a student in the first year of the M.I.St. program with high academic standing. Value: income from the fund.

Charles E. Bates Award in Principled Leadership
Award available to continuing students in the full-time or part-time M.B.A. programs. Preference given to students who have demonstrated leadership potential in previous work experience. Recipients must also exhibit an enhanced commitment to and respect for positive social change within their respective communities. Application required. Value: $5,000.

Bealight Foundation Graduate M.B.A. Fellowship
An entrance award for an M.B.A. student who has demonstrated an enhanced commitment to and respect for social entrepreneurship. Preference given to students who have volunteer or work experience in the public and voluntary sectors.

Beattie Fellowships in Peace and Conflict Studies
Established in honour of William Beattie (UC '38) and Edna Margaret Beattie, this award is intended to support the research of doctoral students in the Department of Political Science in areas related to Peace and Conflict Studies.

The George Becigneul Memorial Award
In memory of George Becigneul, Mrs. Edith Becigneul has established an annual award of $500. This award is to be offered to a full-time graduate student on the basis of academic performance and need in the Centre for Industrial Relations.

Garth and Marjorie Beckett Fellowship in Collaborative Piano
Awarded to an accomplished pianist enrolled full-time in the collaborative piano graduate program who shows excellence in the art of collaborative music making.

Andre Bekerman Memorial Graduate Scholarship
Funds from the Ontario Public Service Employees' Union provide an annual donation of $1,500 for award to a graduate student pursuing a degree in the field of archaeology. Academic merit and financial need will be considered.

Patrick J. Bennett Jr. Admission Scholarship
Awarded to an incoming student on the basis of academic merit and commitment to the community and the environment; evaluated on academic performance, portfolio, and resume. Renewed in the second and third years of the M.L.A. program as long as an A- standing is maintained and the student continues in the M.L.A. program. Value: $1,500 each. Application not required.

Dr. Ann Goldenberg Bergman Scholarship
Awarded to a registered M.S.W. student with a demonstrated record of academic excellence and a strong potential for leadership in professional practice. Apply to the Faculty of Social Work by mid-September for the fall session. Value: annual income.
OSOTF

J. P. Bickell Foundation Graduate Fellowship in Classics
Recipients must be entering or continuing studies at the M.A. or Ph.D. level in the Department of Classics. Financial need and academic merit will be considered. Value: annual income.
OSOTF

Muriel D. Bissell
Muriel D. Bissell has endowed funds to provide awards to graduate students in the Department of Sociology who are strongly committed to research on the problems of development in third world countries. Funds will be used to pay research costs such as travel, off-campus professional development, or data collection. Apply to the Department of Sociology.

Dr. Jan Blumenstein Graduate Fellowship in the Humanities
Gift of Barrie Rose, in honour of Dr. Jan Blumenstein for humanities graduate students in the final stages of their doctorate. Apply by April 1 to the Humanities Centre, University College. Value: annual income.

Ivan Bodnarchuk Scholarship in Ukrainian Studies
The Chair of the Ukrainian Studies Foundation has established a fund, the income of which provides an annual award to a graduate student enrolled in a program of courses in Ukrainian studies. The recipient must demonstrate financial need and academic merit. Apply to the Faculty of Arts and Science Student Awards Selection Committee by March15.
OSOTF

Hermann Boeschenstein Memorial Fellowship in German
Friends of Hermann Boeschenstein, professor of German in University College from 1930-1972, have established an award in his honour. The scholarship, in the amount of not less than $1,000, will be awarded to a student entering the M.A. or Ph.D. program in Germanic Languages and Literatures. The scholarship carries with it membership in University College.

Jean Sutherland Boggs Fellowship
This fellowship provides financial aid to graduate students in the Department of Fine Art. Financial need and academic merit are considered. Awarded on the recommendation of the Department Chair. In any given year the award may be restricted to travel support. Application not required. Value: annual income.

Paula Bonato Memorial Award
Paul and Anna Maria Bonato and family have endowed a fund, the income of which provides an annual award, based on academic merit, for a master's student upon graduation in the Department of History of Art.

The Bonham Scholarships
Awarded on academic merit, a background in the finance industry, and plans to study finance at the Rotman School. Application not required. Value: annual income.

The Senator Peter Bosa Graduate Fellowship in Italian Studies
Mrs. Teresa Bosa has endowed a fund for award to a student in the Department of Italian Studies on the basis of academic merit. Financial need may also be considered. Apply to the Department of Italian Studies.
OSOTF

Harvey Botting Entrance Scholarship
Awarded to international and/or domestic first year M.B.A. students interested in pursuing degree programs at the Rotman School of Management. Selection is based on candidate's background: strength of GMAT scores and undergraduate GPA or demonstrated leadership in previous work experience, or significant contribution to society made through active community involvement and voluntarism. Application not required. Value: annual income.

The Gertrude M. Boyle Memorial Award in Cataloguing
Stephen J. Mathers has established a fund, the annual income of which is awarded to a full-time or part-time Master of Information Studies

student. The recipient must demonstrate a career interest in cataloguing and classification by having taken three or more elective courses in cataloguing, classification, or technical services and ranking highest within this group of courses.

Richard Bradshaw Graduate Fellowship in Opera
Awarded on the basis of financial need to two singers in the master's program in Performance or Opera. Achievement as a tenor/bass/baritone or soprano/mezzo-soprano/alto singer will also be considered.
OSOTF

The Alexander Brady–MacGregor Dawson Scholarship
This scholarship is in honour of two of Canada's most distinguished political scientists, Alexander Brady and MacGregor Dawson, both of whom were members of the former Department of Political Economy for many years. Awarded annually to an outstanding student in the M.A. or Ph.D. programs in the Department of Political Science. Value: at least $3,000.

Kenneth and Helen Bray Graduate Fellowship in Music Education
Kenneth and Helen Bray have established a fellowship for award to an outstanding graduate student in the Music Education program who demonstrates an excellent level of musicianship and teaching ability. Preference given to Canadian citizens showing a strong interest in teaching in Canadian schools. Apply to the Faculty of Music.

Rabbi Brickner Scholarship in Social Service
Awarded to a second year student in the M.S.W. program with high attainment and promise.

Brickstop Corporation Scholarships
Awarded to students concluding the first year of the Master of Architecture program on the basis of academic excellence and demonstrated potential for leadership.

Peter H. Brieger Fellowship
Awarded on the basis of financial need to graduate students in the Department of History of Art. Academic merit will also be considered. On the recommendation of the Department Chair, in any given year the award may be restricted to travel support. Application must be made to the Department of Fine ArVHistory of Art. Value: annual income.
OSOTF

Carmen Brock Fellowship
Awarded on the basis of academic excellence to either M.A. or Ph.D. candidates in the History Department. Strong preference given to graduate students from post-secondary institutions in sub-Saharan Africa, the Caribbean Islands, Belize and/or Guyana who will be studying the history of these regions at the University of Toronto. If no candidate meets all the conditions, the History Department will consider candidates who meet the spirit and intention of the award. Value: annual income.

Craig Brown Traveling Fellowship for History Graduate Students
Open to any doctoral student registered in the History Department who requires financial support in order to travel to conduct research or present a paper at an academic conference. Granted on basis of need. Value: variable.
OSOTF

Ronald Bryden Fellowships
Awarded, on the basis of financial need, to students in the Graduate Centre for Study of Drama allowing them to attend theatre and opera performances which they otherwise could not afford.

Milton A. Buchanan Fellowships
Funds from the estate of the late Milton A. Buchanan provide fellowships for award to outstanding candidates, chosen from the Department of Italian Studies and from the Department of Spanish, for thesis research towards the Ph.D. degree at the University of Toronto. Up to $5,000 is available for each department for award to one or more suitable candidates. Applicants must have completed their course work and have passed their written and oral comprehensive examinations. Inquiries should be addressed to the Graduate Coordinator of either the Department of Italian Studies or of Spanish.

Building Science Conference Award
Awarded to a student completing the second year of the Master of Architecture program achieving the highest average in Building Science courses.

David Buller Memorial Scholarship
Awarded on the recommendation of the Department of History of Art to a graduate student enrolled in the master's program in Visual Studies. Value: variable.
OSOTF

Karel and Ellen Buzek Fellowship
Awarded to graduate students studying at the Centre for Russian and Eastern European Studies (CREES) on the basis of financial need and academic merit. Application required or recipients must be identified as having financial need based on the University's criteria. Apply through CREES. Value: annual income.
OSOTF

The CCCJ Fiftieth Anniversary First Families Award
Awarded on the basis of financial need and academic merit to a graduate student writing a research paper or thesis on one of the following topics: issues related to cultural diversity identifying prejudice, its incidence and/or mode for its elimination. Priority given to research relevant to the Canadian experience. Applicants must be nominated by their graduate unit and provide a letter of recommendation, transcripts, a research proposal, and an OSOTF financial needs assessment form to SGS. Deadline: end of April.
OSOTF

ClBC Access Awards
Two awards of $4,500 each are available to students in the full-time or part-time M.B.A. programs with a disability as defined by the Employment Equity Act. Preference will be given to students with financial need.

ClBC M.B.A. Awards
Awards are available to students in the full-time or part-time M.B.A. programs with a disability as defined by the Employment Equity Act. Preference also given to students with financial need.

Giovanni Caboto Fellowship in Italian Canadian Studies
On behalf of the Italian community, Mr. L. Cianfarani has provided funds, the annual income of which is awarded on the basis of financial need to a graduate student with high academic merit working in the field of Italian Canadian Studies. Apply by letter to the Department of Italian Studies. Value: annual income.
OSOTF

Colin Campbell Memorial Fellowship for Emerging Artists
Awarded on the basis of financial need to a graduate student enrolled in the Department of Fine Art's Master of Visual Studies program. Apply to the Department of Fine Art. Value: annual income.
OSOTF

Vivian and David Campbell Family Foundation Summer Training Fellowship
The Vivian and David Campbell Family Foundation has provided an annual research award, based on financial need, to assist Museum Studies students in pursuing a twelve-week internship that usually occurs between first and second year of the program. Value: annual income.
OSOTF

Canadian Imperial Bank of Commerce Scholarship in Youth Employment
The Canadian Imperial Bank of Commerce has established scholarships for award to one or more students at the Centre for Industrial Relations. The recipient must be planning to work or be working with the holder of the ClSC Chair in Youth Employment. Eligibility is based on financial need and academic merit. Value: annual income.
OSOTF

Canadian Institute of Steel Construction Fellowship
Awarded to a student completing the second year of the Master of Architecture program on the basis of academic achievement in the structures and building sciences courses of the second year, combined with innovation in steel design as demonstrated in the comprehensive building studio.

Capital Markets Institute ORDCF Graduate Fellowships
Awarded, on the recommendation of the Ph.D. Program Director and the Associate Dean of Management, to Ph.D. students with an interest in capital market research. Value: annual income.

Harold Carter Fellowship
Awarded to one outstanding performing artist studying a stringed instrument in the Graduate Department of Music. The award is tenable at the master's level for a maximum of two years. Application not required. Value: annual income.

John M. Cassaday M.B.A. Fellowship in Marketing
Awarded, on the recommendation of the Rotman School of Management, to a student entering the full-time M.B.A. program with a planned specialization in Marketing. Winners will show good academic standing and possess related work experience. Preference given to students who demonstrate financial need and who do not hold other awards offered by the School. Application not required. Value: annual income.

Rudolf and Rosalie Cermak Fellowship
The award will be given to a graduate student in the Centre for Russian and East European Studies pursuing advanced study of the Czech Republic or is coming from the Czech Republic to study or pursue research in the humanities or social sciences.

Rudolph and Rosalie Cermak Graduate Fellowship
Awarded to students affiliated with the Centre for Russian and East European Studies pursuing advanced study on the Czech Republic. Preference given to students required to acquire language training or research abroad in order to complete their degree requirements.
OSOTF

Dipty Chakravarty Bursary Related to Bengal/Bengali
Recipients may be graduate or undergraduate students undertaking a course of study related to Bengal/Bengali. Financial need and academic merit considered. Value: annual income.
OSOTF

Mr. Paul Chan Po Shum and Mrs. Rose Chan Wong Chi Chiu Memorial Scholarship
Anna Chan has endowed a fund, the income of which provides a scholarship to a second year Master of Information Studies student specializing in technical services, who wishes to pursue a career in the area of knowledge or information organization. Financial need and academic merit are considered. Apply to the Faculty of Information Studies in the fall. Value: annual income.
OSOTF

The Colin Chase Memorial Bursary
Friends and colleagues of the late Professor Colin Chase have endowed funds to provide an annual bursary to a graduate student in good standing in the Centre for Medieval Studies. The bursary is granted on the basis of financial need.
OSOTF

Gordon F. Cheesbrough M.B.A. Graduate Fellowship
Recipient must be an M.B.A. student preferably with a concentration in ethics, or secondly, finance. No application required. Value: annual income.

Gordon Cheesbrough Graduate Fellowship in Philosophy
Gordon Cheesbrough has endowed a fund in the form of five to six fellowships, each valuing up to a maximum of $500 for award to outstanding graduate students for research (i.e., conference presentations, travel, etc.). Apply to the Department of Philosophy by April 30.

Grace Hannah Chellam Scholarship
Awarded annually (approximately $1,800) on the basis of financial need to a M.S.W. or Ph.D. student with a special interest or specialization in the area of international social work.
OSOTF

The Bernard Chernos Graduate Fellowship in Law
Awarded to a graduate student demonstrating academic excellence and financial need.

Julia Ching Memorial Fellowship in Chinese Thought and Culture
Scholarship awarded to an outstanding Ph.D. student in the Departments of Philosophy, Religion, or East Asian Studies. This scholarship assists the student with later studies on Chinese thought and culture. Value: annual income.

David Chu Travelling Scholarships
Recipients may be graduate or undergraduate students undertaking a course of study related to the Asia-Pacific region. The award supports a period of study or research in the region. Financial need and academic merit will be considered. Applicants must be nominated by their graduate unit to the Faculty of Arts and Science Student Awards Committee by March 15. Value: annual income.
OSOTF

Citigroup Corporate and Investment Bank M.B.A. Award
Awarded to a full-time international M.B.A./Executive M.B.A. student on the basis of academic merit.

Robert Franklin Clark Graduate Fellowship in Ukranian Language and Literature
The Canadian Foundation for Ukranian Studies has endowed funds for award to one or more students pursuing studies in the field of Ukranian language and literature. Value: annual income.
OSOTF

Class of 1997 Scholarship
For award, on the basis of financial need, to two students at the end of their first year in the M.B.A. program, who, through leadership and commitment to excellence, have contributed the most to the learning experience of their classmates. Value: annual income.
OSOTF

Class of 2002 M.B.A. Award
Awarded each year to two full-time M.B.A. students entering their second year. They will be chosen for their outstanding contributions to the Rotman and/or wider community. Through their involvement, they have enhanced the Rotman experience of their peers. Recipients must demonstrate financial need, with preference given to students who have not received other awards in aggregate exceeding $2,000 per year.

Frederick Coates Scholarship Fund
On the recommendation of the Council of the Faculty of Architecture, Landscape and Design, $1,000 is awarded to a graduate student registered in third year who ranks highest in the annual examinations of third year: $1,000 is awarded to a graduate student registered in second year who ranks highest in the annual examinations of second year, and $1,000 is awarded to a graduate student registered in first year who ranks highest in the annual examinations of first year.

Delmar and Audrey Cobban Bursary
Delmar and Audrey Cobban have established a fund, the annual income of which is awarded to a student entering a Master of Information Studies degree program. The award is given on the basis of financial need and academic merit. Application forms available from the Office of the Registrar at the Faculty of Information Studies.
OSOTF

The Maurice Cody Research Fellowship
Established by students and friends of the late Henry Maurice Cody, this fellowship is awarded to a full-time graduate student enrolled in the Departments of History, Political Science, or Economics. Value: available income.

Frank and Nella Colantonio Graduate Fellowship for Italian Canadian Studies
Awarded to a graduate student, on the basis of academic excellence and financial need, who is studying Italian Canadian history and culture or labour issues. Value: annual income.

Council on Friendship Fund
Awarded to a graduate student in Social Work who intends to specialize in studies related to Canadian newcomers and their problems as new Canadians. Apply to the Office of the Coordinator of Admissions, Faculty of Social Work, after fall registration. Value: annual income.

John Crispo Graduate Award
Friends and colleagues of John Crispo have established an endowment in recognition of the role he played in founding the Centre for Industrial Relations in 1965 and serving as Director until 1975. The annual income is awarded, on the basis of academic merit and financial need, to one or more graduate students enrolled at the centre. Value: approximately $4,000.
OSOTF

Daniel and Elizabeth Damov Graduate Fellowship
Awarded to graduate student(s) affiliated with the Centre for Russian and East European Studies, with preference given to students studying Bulgaria and the Balkan region.

The Eleanor Frances Day Award
Awarded to M.S.W. or Ph.D. program students demonstrating financial need. Apply to the Faculty of Social Work, Office of Student Services and Records. Value: annual income.
OSOTF

V. A. De Luca Memorial Fellowship
In memory of Professor V. A. De Luca, family, friends, and colleagues have generously endowed funds for award to one or more full-time graduate students in the Department of English. Financial need and academic merit are considered. Value: annual income.
OSOTF

Ken Dean Memorial Fellowship
Awarded, on the basis of financial need, to a gifted performer enrolled in the graduate music program in performance or the advanced certificate program. Candidates must demonstrate outstanding ability and promise in the area of jazz. When the Master in Jazz Performance degree has received approval, the fellowship will be awarded to a student in the program.

Apply to the Faculty of Music. Value: annual income.

Dean's E.M.B.A. Award of Merit
Awarded to a student entering the Executive M.B.A. program based on the candidate's exceptional job performance, demonstration of success resulting in promotion or award, academic merit, and demonstration of leadership in current role. Apply directly to the department. Value: $10,000 applied against the E.M.B.A. program fee.

Dean's Discretionary Graduate Fellowships Fund in Music
Graduate fellowships awarded at the discretion of the Dean of the Faculty of Music. Apply to the Faculty of Music. Value: annual income.

Dean's Fellowship
For award, on the basis of financial need, to new students in the Rotman School of Management who also have leadership potential demonstrated through work or extracurricular activities and high academic performance demonstrated in undergraduate work and GMAT scores. Value: annual income.
OSOTF

Dean's Scholarship
This scholarship is awarded, on the basis of financial need, to a student entering the joint LL.B./M.B.A. program. Value: annual income.
OSOTF

Professor Laurent-G. Denis Memorial Scholarship
Awarded to a student in any program of the Faculty of Information Studies who will have completed at least four half-courses before taking up the award and will be a full-time student during the tenure of the award. Application must be made to the Faculty of Information Studies by December 15. Value: annual income.

Robert Deshman Memorial Fund
Awarded annually to a graduate student in the Department of History of Art. Financial need and academic merit are considered. Precedence is given to students studying Medieval Art and Architecture. Apply to the Chair, Department of Fine Art. Value: annual income.
OSOTF

Victor Di Bello Graduate Scholarship—OSOTF
Pro Arte Orchestra and friends of Victor Di Bello have established, a fellowship for award annually to a gifted Faculty of Music graduate student on any stringed instrument. Value: annual income.
OSOTF

Arthur Dickson and George Street Award
Recipients must be first year students in the Faculty of Social Work studying the social aspects of HIV/AIDS. Consideration given to students who are infected or affected by HIV/AIDS and/or have volunteered in the gay community or in palliative care.
OSOTF

Carol Dickson Memorial E.M.B.A. Scholarship
Awarded to a female student entering the E.M.B.A. program at the Joseph L. Rotman School of Management. Awarded on the basis of academic merit and financial need, with preference given to a candidate with a background in manufacturing/technical/human resources and/or fluency in two or more languages.

Ilona Diener Fund
Awarded to graduate students participating in the University of Toronto-Central European University Graduate Student Exchange Program.

Doctoral Fellowship
For award, on the basis of financial need, to the most outstanding and promising applicants of the Rotman School of Management's Ph.D. program. Value: annual income.
OSOTF

Doctoral Thesis Prize in French
Valued at approximately $100, this prize is awarded annually to the doctoral candidate who submits the best Ph.D. thesis in the Graduate Department of French.

Helen Jeannette Dow Fellowship in Art History
Marguerite Ruth Dow has endowed funds for an annual award to a graduate student entering a program in the Department of History of Art. Academic merit and financial need are considered. Preference given to a graduate from University College. Value: annual income.
OSOTF

Kathy Duffy Memorial Scholarship
Accenture has generously endowed funds for an annual scholarship to a female student at the Rotman School of Management. Based on financial need and academic merit.
OSOTF

Lucile Wakelin Dunlevie Graduate Award in Italian Studies
Awarded, on the basis of academic merit, to a graduate student in the Department of Italian Studies. Financial need may also be considered. Value: annual income.

Dan Dunlop Fellowship
An annual donation of $2,500 is awarded to a student completing the second year of the Master of Architecture program who exhibits potential for leadership in the field and achieves excellence in studio courses taken in the first two years.

Gerard Dunnhaupt Fellowship Award
To assist one doctoral student whose research into European music prior to 1800 would be improved if the opportunity to travel to Europe was available. Apply to the Dean of the Faculty of Music. Value: $1,500 a year.

The Howard Dunnington-Grubb Admission Scholarship
Awarded to a candidate applying to the Master of Landscape Architecture program based on ranking of submission by the Admissions Committee.

Laszlo T. Duska Memorial Fellowship
Awarded by the Council of the Faculty of Arts and Science to academically excellent graduate students who have taken at least one course related to Hungarian studies. Eligible students are drawn from the Department of Slavic Languages and Literatures or other graduate units where research is focused on Hungarian studies. Application not required. Value: annual income.

EAS Graduate Research Scholarship
Various donors have contributed to a fund, the annual income of which is awarded to a graduate student in the Department of East Asian Studies.

The E. J. U. Award
Funds have been donated to provide an annual award of $3,400 to a registered M.S.W. student on the basis of financial need. Upon completion of enrolment, students may apply by September 15 to the Faculty of Social Work, Office of Student Services and Records.
OSOTF

E.M.B.A. Academic Director's Award
Awarded to an exceptional female student entering the E.M.B.A. program who has demonstrated strong leadership skills in her personal and professional life. Successful applicants will have achieved high undergraduate academic standing and a successful GMAT score.

E.M.B.A. Community and Volunteer Service Scholarship
Awarded to a student on admission to the Executive M.B.A. program on the basis of need, merit, and community and volunteer service. Direct inquiries to the department. Value: $10,000 applied against the E.M.B.A. program fee.

E.M.B.A. Fellowship for Non-Profit Award
Awarded to a student on admission to the E.M.B.A. program based on need, merit, and employment in the not-for-profit sector, particularly for those involved in charitable arts organizations in the community and social services sectors. Application required. Direct inquiries to the General Manager, E.M.B.A. program. Value: $10,000 applied against the E.M.B.A. program fee.

Earhart Foundation Fellowships
Awarded to a graduate student in Political Science.

Harry Eastman Graduate Award
Awarded for the most outstanding second year Ph.D. paper in International Economics.

The Eaton Graduate Fellowship
For award on the basis of financial need to a master's or doctoral student enrolled in the Faculty of Music. Performance excellence and academic standing will also be considered. Value: annual income.
OSOTF

Department of Economics Student Award
Awarded on the basis of financial need and high academic standing to a graduate student in the Department of Economics. Value: annual income.
OSOTF

Rene Efrain Memorial Scholarship in French History in the Department of History
Awarded on the basis of financial need to a graduate student studying French History in the Department of History. Academic merit will also be considered.
OSOTF

Rene Efrain Memorial Scholarship in Roman History in the Department of Classics
Awarded on the basis of financial need to a graduate student studying Roman History in the Department of Classics. Academic merit is also considered.
OSOTF

Veneta and James Elieff Fellowship
Awarded on the basis of academic merit to graduate students affiliated with the Centre for Russian and East European Studies conducting research on Bulgaria.

H. Albert Ellam Memorial Travel Award
The estate of Ida Maud Lillian Ellam provides an award to graduate students in the Department of Religion on the basis of financial need; academic merit also considered. Awarded on the recommendation of the Department Chair and restricted to travel support. Apply to the Department of Religion. Value: annual income.
OSOTF

The Emeritus History Professors Graduate Fellowship
Awarded, on the basis of academic merit, to full-time graduate students in the Department of History. Value: variable.

Department of English Creative Writing Scholarship
Awarded to a graduate student enrolled in the Creative Writing program in the Department of English on the basis of financial need; academic merit may also be considered. Application required. Value: annual income.
OSOTF

Ernst and Young Scholarship Endowment Fund
Awarded to students in the Master of Management and Professional Accounting program. Conditions to be determined.

FIPA Graduate Fellowship in Indian Classical Music
Awarded to an outstanding Faculty of Music student in the graduate program or Advanced Certificate Program pursuing the study and/or performance of Indian Classical Music. Application not required. Value: annual income.

(FIS) Dean's Advisory Board Graduate Scholarship
Awarded to a full-time student with high academic standing. Financial need will be considered. Value: annual income.

FLIS 60th Anniversary Bursary
Alumni and friends of the Faculty of Information Studies have established a bursary available to a full-time student or students in any master's program in the Faculty. The bursary is offered annually for the spring session on the basis of financial need and academic merit. Apply to the Faculty by November 1. Value: annual income.
OSOTF

Victor Feldbrill National Graduate Fellowship in Orchestral Conducting
Awarded to a student in the graduate orchestral conducting program or the Advanced Certificate of Music Program. It will be given to one student a year who demonstrates the talent and the motivation to take possession of many of the prestigious podiums around the world. As his schedule permits him to be in Toronto, Victor Feldbrill will coach and mentor the young student conductor. The University of Toronto Resident Orchestra Conductor Raffi Armenian will also meet once a week with the recipient and there will be opportunities for the student to conduct at the podium of the UTSO, UT Chamber and UT Opera rehearsals. Preference given to a Canadian student.

Zelda Feldbrill Memorial Award
Awarded on the basis of financial need to a full-time graduate student enrolled at the Faculty of Social Work with a demonstrated interest in working with families, children, and adolescents. Apply to the Faculty of Social Work, Office of Student Services and Records. Value: annual income
OSOTF

Mary Jane Felker Fellowship
Established through a bequest from the late Mrs. Felker of Guelph, Ontario, the fellowship is open to graduates of any recognized university who propose to undertake full-time graduate work in business administration leading to the M.B.A. degree. Annual value: approximately $2,000.

Charles Fine Memorial Bursary
Awarded to a student enrolled in the first year of Social Work, with preference given to candidates in the Social Group Work showing special interest in emotionally disturbed youth or children. Apply to the Office of the Coordinator of Admissions, Faculty of Social Work, after fall registration. Value: annual income.

Department of Fine Art Graduate Scholarship
Awarded to a graduate student in the Department of Fine Art on the basis of financial need; academic merit may also be considered. Application required. Value: annual income.
OSOTF

Augustine Fitzgerald Fellowship in French
The income from the Augustine Fitzgerald Fund provides a scholarship awarded annually to a Canadian-born, English-speaking graduate student, whose native tongue is not French, for further study of or research in the French language or French literature. Value: approximately $3,000.

James D. Fleck Student Entrance Award
Entrance award based on three criteria: need, merit, and employment in the not-for-profit sector, with preference for those in charitable arts organizations and community and social services. Preference given to a candidate who intends to remain employed in the not-for-profit sector, particularly in charitable arts and community and social services. Applicants must have demonstrated need for financial assistance on their admissions application.

James Fleck Graduate Fellowship in the Humanities
Awarded to a humanities student in the final stages of doctoral studies. Apply to the Humanities Centre, University College.

Rudolf and Viera Frastacky Fellowship
Awarded on the basis of academic merit to a student affiliated with the Centre for Russian and East European Studies.
OSOTF

Rudolf and Viera Frastacky Graduate Fellowship
Awarded to a student affiliated with the Centre for Russian and East European Studies.

Mary Freeman Scholarship
Annually awarded to a student entering the Master of Information Studies degree program in the Library and Information Science stream. Awarded on the basis of financial need and academic merit. Application forms are available from the Office of the Registrar, Faculty of Information Studies.
OSOTF

Department of French Graduate Scholarships
Awarded by the Faculty of Arts and Science, on the recommendation of the Department of French, to graduate students with outstanding achievements entering particular areas of research in a Ph.D. program. Eligible students are drawn from the Department of French. A total of seven scholarships are available. Application not required. Value: variable.

Barbara Frum Memorial Award in Canadian Scholars hip
Awarded to an entering graduate student in the Faculty of Arts and Science in a field of study related to Canada. Value: annual income.

Garden Club of Toronto Scholarship
Awarded to a student concluding the second year of the Master of Landscape Architecture program who has attained the highest academic average in the mandatory Plant Ecology courses.

Rip Gauthier Memorial Scholarship in Marketing
FirstService Corporation has endowed a fund for an annual award to a full-time M.B.A. student who exhibits the maximum potential for leadership in the marketing area. Recipients selected on the basis of financial need, academic excellence, and extra-curricular activities in the first year of studies. Application required.
OSOTF

Joint Initiative in German and European Studies Graduate Student Fellowships and Travel Awards
Awards to support advanced graduate student dissertation projects in German and European studies. Financial need and academic merit will be considered.

Department of Germanic Languages and Literatures Graduate Scholarship
Awarded on the basis of academic merit to an outstanding graduate student in the Department of Germanic Languages and Literatures. No application required. Value: annual income.

The Samuel Godfrey — Y.M. & Y.W.H.A. Memorial Bursary
Awarded to a graduate of a recognized Canadian university specializing in work with individuals, families, and small groups and who is enrolled as a M.S.W. degree candidate. Apply to the Office of the Coordinator of Admissions.

Faculty of Social Work, after fall registration. Value: annual income.

Peter Godsoe/Scotiabank Scholarship in Financial Engineering
Awarded to two M.B.A. students annually, one an entering student with a background and interest in Financial Engineering, the other a returning student who has achieved outstanding performance in first year and will be majoring in Financial Engineering in second year.
OSOTF

Peter Godsoe/Scotiabank Scholarship in International Finance
Awarded to two M.B.A. students annually, one an entering student with a background and interest in International Finance, the other a returning student who has achieved outstanding performance in first year and will be studying Finance in second year.
OSOTF

Emilio Goggio Scholarship (Graduate)
In memory of Professor Emilio Goggio, his sons have established an annual award for an outstanding full-time student in a master's or doctoral program in the Department of Italian Studies. Value: approximately $600.
OSOTF

Grace Safeer Goldberg Award
Awarded on the basis of financial need to a second year M.S.W. student, with a minimum B average, concentrating on direct practice.
OSOTF

Mitch Goldhar Scholarship for Excellence in Planning
The Sacks Partnership has endowed a fund for an award, on the basis of academic merit, to an outstanding graduate student either entering or continuing in the Master of Science in Planning program. Application not required. Value: annual income.

The Gordon Family Graduate Award in Gerontological Social Work
Awarded to a second-year M.S.W. student or a Ph.D. student who demonstrates dedication to the field of gerontological social work.
OSOTF

Thomas A. Goudge Memorial Fellowship in Philosophy
An admission scholarship is awarded to an outstanding student commencing graduate studies in philosophy. Preference given to Canadian citizens and permanent residents. Financial need and academic merit are considered. Application not required. Value: annual income.

William S. Goulding Memorial Award in Architectural History
Mrs. J. F. Goulding has donated funds for award to the student completing the third year of the Master of Architecture program with the highest average in at least three one-term courses in architectural history, of which one must be taken in the third year. No application required.

Graditude Campaign Bursary
Master of Social Work students from the graduating class annually donate funds to provide a bursary for award to one or more M.S.W. students on the basis of financial need. Preference given to candidates with excessive child care demands. Value: academic tuition fees, based on the domestic student fee level or less depending on the funds available.

Graduate Fellowships in Capital Markets Research
Awarded to a graduate student undertaking advanced research and study in the area of capital markets research. Awarded on the recommendation of the Associate Dean, Graduate Studies, Faculty of Law. Value: annual income.

Graduate Fellowships in Law and Innovation
Awarded to a graduate student undertaking advanced research and study in the area of law and innovation at the Faculty of Law's Centre for Innovation. Apply to the Associate Dean of Graduate Studies, Faculty of Law. Value: annual income.

Graduate Geography and Planning Student Society (GGAPSS)
Students, alumni, family friends, and colleagues of the graduate programs in geography and planning have established a fund, the income of which provides an annual award to at least one graduate student on the basis of financial need.
OSOTF

Graduate Women's Studies Entrance Prize
Kay Armatage and others have established a fund, the annual income of which is awarded to an incoming graduate student in the Collaborative Program in Women's Studies. Financial need and academic excellence may be considered.

Graduating Class Award
The annual income from funds generously raised by the M.S.W class of 1997 is available

to an M.S.W. student on the basis of financial need.
OSOTF

Ginny Medland Green Graduate Fellowship in Music
Awarded to one outstanding student in the Graduate Studies or Advanced Certificate program in music.

The Irving Grossman Prize
Awarded to a Master of Architecture student on the basis of excellence and innovation in the final design thesis - in the area of multiple-unit housing or adaptive re-use of buildings for housing purposes - and on the basis of professional promise in one or both of these areas. Value: annual income.

The Guardiaregia Club and Friends Graduate Fellowship in Memory of Nicola Mastrogiovanni and Nicola Pallotta in Italian Studies
Awarded to a graduate student in the Department of Italian Studies on the basis of academic merit and financial need. Application not required. Value: annual income.

Alberto Guerrero Graduate Scholarship
Awarded to an outstanding pianist in the graduate program in Performance or the Advanced Certificate Program with a demonstrated interest in piano pedagogy. Apply through the Faculty of Music. Value: annual income.

Morely Gunderson Prize in Industrial Relations
A plaque and an announcement in the Globe and Mail are presented to a student or graduate of the Centre for Industrial Relations. The award recognizes outstanding accomplishments and contributions to the M.A. or Ph.D. programs. Submit nominations to the Director, Centre for Industrial Relations.

John Haddad Scholarship
Awarded to a student entering the second year of the master's program in Social Work. Student must demonstrate interest and commitment to the field of mental retardation or the developmentally handicapped. Apply to the Faculty of Social Work. Value: annual income.

Hain Graduate Fellowship in the Department of Philosophy
Awarded on the basis of academic merit to a student in any sub-discipline of Philosophy.

Ralph and Roz Halbert Connaught–Fulbright Graduate Fellowship in the Centre for the Study of the United States
Awarded to a University of Toronto student travelling to the United States as a Fulbright scholar, or to an American student studying at the University of Toronto as a Fulbright scholar. Eligible students must meet the qualifications and must apply to the Canada–US Fulbright Program to become a Fulbright scholar. The annual income of the endowment is awarded on the recommendation of the Director of the Centre for the Study of the United States. Web: www.usembassycanada.gov/fulbrigh.htm.

Dmytro and Natalia Haluszka Scholarship in Ukrainian Studies
The Chair of the Ukrainian Studies Foundation has established a fund, the income of which provides an annual award to a graduate student enrolled in a program of courses in Ukrainian studies. The recipient must demonstrate financial need and academic merit. Apply to the Faculty of Arts and Science Student Awards Selection Committee by March 15.
OSOTF

Lisa Hamann Memorial Award
Awarded to a full-time, second-year female M.B.A. student. Must have strong leadership skills, be involved in extracurricular activities, be of good academic standing, have a demonstrated interest in international studies, and be legally eligible to work in Canada upon graduation. Value: annual income.

Mary Elizabeth Hamilton Award
Awarded to a full-time M.S.W. student in the Faculty of Social Work. Merit will be considered. Apply to the Faculty of Social Work, Office of Student Services and Records.

The Robert F. Harney Graduate Research Grants in Ethnic, Immigration, and Pluralism Studies
Awarded to U of T graduate students conducting research related to ethnic, immigration, and pluralism studies. The award supports a specific research project undertaken to meet the requirements of a graduate degree program, normally an M.A. or Ph.D. thesis. Applications should include a description of research, a budget, and a letter of support from a research supervisor. Contact the Ethnic and Pluralism Studies Collaborative Program at ethnicstudies@utoronto.ca or phone (416) 978-4783. Deadlines: September 30 and April 30. Value: up to $2000/academic year. Proposals

for larger amounts may be considered, depending on available funding.

Douglas G. Hartle Fellowship
Awarded annually to candidates
1. on completion of their doctoral program with research on a relevant policy issue, and
2. when nominated by their respective graduate unit: Economics, Law, Management (Rotman School), and Political Science.

Each graduate unit may nominate one person and submit the name, research topic and other supporting information to the Director of the Institute for Policy Analysis by May 31 of each year. The Director and the Institute Committee will select the successful candidate for announcement by June 30. Value: annual income.

The G. R. Heffernan Fellowship
Awards totalling up to $1,500 are made on the basis of academic performance and financial need to a full-time student in the Master of Industrial Relations program who intends to specialize in the area of Human Resource Management and Organizational Behaviour.

The Helleiner Graduate Fellowship
Awarded on the basis of academic excellence to a doctoral student in Economic Development or International Economics. Value: annual income.

Margaret Higgins Memorial Fellowship
Awarded to a humanities student in the final stages of doctoral studies. Apply to the Humanities Centre, University College.

Dr. Daniel G. Hill, Sr. Scholarship
Various donors have endowed funds to provide an annual scholarship to honour the work of Dr. Dan Hill, Sr. It is awarded to a student enrolled in the M.S.W. program, with consideration given to the recruitment, support, and retention of black students. Financial need, academic excellence, and promise will be considered. Apply by September 15 to the Faculty of Social Work.
OSOTF

Jokers Hill Graduate Award
Awarded, on the basis of financial need, to a graduate student in the Department of Zoology involved in research at Jokers Hill; academic merit may also be considered. Application required. Value: annual income.
OSOTF

Part-Time M.A. History Award
Awarded annually to a part-time M.A. student on the recommendation of the Department of History. All part-time M.A. students are eligible but preference will be given, when feasible, to incoming students and those with a special interest in studying nineteenth-century British history. Academic merit is also considered when making the $1,000 award.

Samuel Hollander Graduate Award
The U of T Press, the Department of Economics and others have generously endowed funds to offer an annual award to the most distinguished Ph.D. student in the Department of Economics. Preference is given to students in History of Economic thought. Value: annual income.

Houlden & Morawetz Graduate Scholarship
Awarded to a graduate student in the Graduate Department of Law on the basis of financial need and academic excellence.
OSOTF

Howarth–Wright Graduate Fellowship
Awarded to a Master of Architecture student following the second or third year. The award is offered on the basis of high academic achievement, interest in the work of Frank Lloyd Wright, research skills in architectural history, and the overall strength of the research proposal. The recipient will publicly present research results at the Faculty and be expected to pursue publication of the research. Apply to the Dean of the Faculty of Architecture, Landscape, and Design by submitting a research proposal on the work of Frank Lloyd Wright. Deadline: last day of the winter session. Value: annual income.

W. C. G. Howland Prize
Estates of W.C.G. Howland have provided funds for award to the most outstanding performance in the LL.M. program. Value: annual income.

Hudson's Bay Charitable Foundation Award
Awarded on the basis of financial need to a student in the second year of the Master of Information Studies program specializing in Archival Studies. The award winner's annual practicum will be carried out at the Hudson's Bay Company. Value: annual income.
OSOTF

Anne Hume Bursary
For a female M.I.S. student resident in the City of Windsor or County of Essex. Value: $150.

Hungarian Chamber of Commerce Graduate Exchange Fund
Awarded, on the basis of academic merit, to graduate students participating in the exchange program between the University of Toronto and Central European University. The award enables students to continue their studies. Eligible candidates include students from one university visiting the other university for one session. Apply to the Director of the Centre for Russian and East European Studies. Value: annual income.

Hungarian Helicon Foundation (Ontario) Graduate Award
Awarded to a graduate student pursuing advanced studies in any aspect of Hungarian studies. Recipient is selected on the basis of academic excellence and financial need. Application consists of a nomination from the student's graduate unit, a letter of recommendation, transcripts, a research proposal from the applicant, and an OSOTF financial needs assessment form. Deadline: end of April. Value: annual income.
OSOTF

The Dr. M. Huta Scholarship
Awarded annually on the basis of financial need and academic merit to a student enrolled in any of the Ukranian language, literature, or culture course(s) currently offered in the Department of Slavic Languages and Literatures. The award helps defray travel costs to the Ukraine to participate in an approved program of study in Ukrainian language, literature, culture or related subjects. Preference given to summer programs at major Ukrainian universities approved for credit at a Canadian university. Applications judged on the basis of the student's standing in Ukrainian courses in the Department, overall academic standing, commitment to a program of Ukrainian studies, and the quality and significance of the proposed program in the Ukraine. Letters of application outlining the proposed program of study must be submitted to the Department Chair by February 15.
OSOTF

Florence Hutner Bursary
Awarded, on the basis of financial need, to a student in the Master of Social Work degree program in the Community Practice Sequence. Apply to the Office of the Coordinator of Admissions, Faculty of Social Work, after fall registration. Value: annual income.

India–Canada Association Scholarship
The India–Canada Association has generously endowed funds to provide an annual award to one or more full-time graduate students at the University of Toronto engaged in research in the field of South Asian studies. Preference will be given to candidates whose research activities require travel to India. Application information is available in the early spring from the Director of South Asian Studies. Value: annual income.

India's 50th Anniversary Graduate Prize
The Consulate of India has generously endowed funds to provide an annual award to a graduate student enrolled in the social sciences or humanities. Study or research must be focused on India. Eligibility is based on academic merit and financial need. Apply by April 1 to the Centre for South Asian Studies. Value: annual income.
OSOTF

Professor Howard H. Irving and Family Award
Awarded to a student in the combined J.D./M.S.W. program with an interest in family mediation, family law, or family counselling. Merit will be considered.

The Elmer Iseler Fellowships
Awarded, on the basis of financial need, to graduate students in the choral conducting program at the Faculty of Music.
OSOTF

Department of Italian Studies Graduate Scholarship Fund
Awarded to a graduate student in the Department of Italian Studies on the basis of financial need; academic merit may also be considered. Application required.
OSOTF

Italian–Canadian Immigrant Graduate Fellowship in Italian Studies
Awarded to a graduate student in the Department of Italian Studies on the basis of academic merit and on past volunteer contributions to the Italian community. Financial need may also be considered. Apply to the Department of Italian Studies. Value: annual income.

Chancellor Jackman Graduate Student Fellowships in the Humanities at the University of Toronto
Awarded to a graduate student enrolled in a humanities program in the Faculty of Arts and Science. The award is paid on re-registration in the next fall session at the University of Toronto,

in three equal instalments: September, January, and May. In the academic year in which the fellowship is held, the recipient must be registered in the first five years of doctoral-stream study (i.e., must be eligible for the University's graduate student funding guarantee). Graduate units in the Humanities in the Faculty of Arts and Science are asked to forward nominations to the Faculty of Arts and Science Student Awards Committee by March 15. Value: one or more awards of $25,000 each.

Petro Jacyk Graduate Scholarships in Ukrainian Studies
Awarded to graduate students in Ukrainian Studies at the Centre for Russian and East European Studies. Value: annual income.

The Zbigniew Jarkiewicz Memorial Scholarship Fund
The Zbigniew Jarkiewicz Memorial Scholarship Fund provides an annual income of $400 to $500 awarded to a full-time graduate student registered at the M.A. or Ph.D. level in the field of classics or classical archaeology.

The Pandit Jasraj Endowment Award
Through the support of the Foundation for the Indian Performing Arts, an award has been established for a graduate student studying East Indian Classical Music at the Faculty of Music.

Class of 2003 Trayten Jensen Memorial Award
The Class of 2003 and the family of Trayten Jensen have endowed funds for an annual award to a full-time M.B.A. student. Recipients chosen on the basis of financial need and outstanding contributions to the Rotman and/or wider community. No application required.
OSOTF

Diljit and Gulshan Juneja Award for South Asian Studies
For award to a master's or doctoral student in any department or faculty in the University whose course program or research is concentrated in the area of South Asian Studies. The award is made on the basis of financial need. Academic merit will also be considered. Value: annual income.
OSOTF

Kamihdartz Scholarship in Strategic Management
Awarded, on the basis of financial need, to a continuing full-time or part-time M.B.A. student majoring in one of the following areas: Strategy, Consulting, Innovation and Entrepreneurship, or Global Management. Academic merit may also be considered.
OSOTF

Ken Karpiak Memorial Scholarship
Various donors have contributed to a fund that provides an annual scholarship to a student in the Faculty of Architecture, Landscape, and Design. Awarded on the basis of ranking by the Admissions Selection Committee. Value: 213 of annual income.

Katie Keeler French Language Fellowships
Awarded to a student pursing a program of study related to the French language. Financial need and academic merit are considered.
OSOTF

Katie Keeler German Language Fellowships
Recipients must be pursuing a program of study related to the German language. Financial need and academic merit are considered.
OSOTF

Edward B. Kernaghan Fellowship
This fellowship was established to encourage graduate work in economics, with special reference to finance and financial institutions. Value: annual income.

Joseph Kerzner Award
Awarded to an accounting student in the Rotman School of Management on the basis of financial need and academic merit. Value: annual income.
OSOTF

W. L. Mackenzie King Fellowship in International Relations
Established by friends of the late Rt. Hon. W. L. Mackenzie King, this fellowship is designed to encourage research in Canadian External Affairs. Value: available income. Offered in alternate years.

Andrew Alexander Kinghorn Award
Awarded to the student completing the first year of the M.B.A. program or diploma program with the highest academic standing.

Andrew Alexander Kinghorn Fellowship
The estate of the late Andrew Alexander Kinghorn provides an annual fellowship to a graduate student(s) with the highest grade point average(s) undertaking full-time studies in business administration. Value: annual income.

Leonore V. Kinghorn Scholarship
The estate of the late Andrew Alexander Kinghorn provides annual fellowships in varying amounts up to approximately $8,000 in the Department of History of Art. Preference is given to students who have passed their Ph.D. comprehensive exams, to permit travel and research on an approved itinerary. Apply to the Graduate Coordinator of History of Art.

Martin Klein Fellowship Fund for Students from Africa
Awarded to graduate students from Africa based on academic excellence and need for assistance with travel costs associated with research, academic conferences, and/or course of study. Eligible students will be drawn from the Department of History. Applications should be sent to the Department of History, Sidney Smith Hall, Room 2074. Value: annual income.

Harry B. Kohl Award
Awarded to a senior student concluding the second or third year in the Master of Architecture program to attend a conference related to architectural practice or education who has demonstrated capacity to represent the school effectively. Value: annual income.

Israel and Golda Koschitzky Fellowship in Jewish Studies
Through a generous gift from the Israel Koschitzky Family Foundation, a scholarship has been established for a graduate student enrolled in a program related to Jewish studies. Apply by February 1 to the Director of the Jewish Studies Program, University College, Room 314.

Greta Kraus Graduate Fellowship
Awarded to an outstanding voice student entering the graduate program in Performance/Voice or the Advanced Certificate in Performance. Apply through the Faculty of Music. Value: annual income.

Eric David Baker Krause Graduate Fellowship
Family, friends, and colleagues of Eric Krause have endowed funds, the income of which provides an award, on the basis of financial need and academic excellence, to master's or doctoral candidates in the Institute of Environmental Studies, who meet OSOTF guidelines. Preference given to students who have obtained their undergraduate degree from the University of Toronto, Division of the Environment. Apply to the Institute for Environmental Studies.
OSOTF

Karel Kukula and Family Graduate Award
Awarded to a student researching Czech history, society, and culture on the Czechs' interaction with the other peoples of Central Europe. Based on financial need, and academic merit.
OSOTF

Richard and Bobbie Kunreuther Scholarship
Awarded to a M.S.W. or Ph.D. student at the Faculty of Social Work concentrating on direct practice in child and family. Financial need and merit will be considered.

The Kuwabara-Jackman Architecture Thesis Gold Medal
Awarded to the student graduating from the Master of Architecture program judged by the Faculty to have completed the most outstanding March thesis of that year.

Lancaster House Graduate Award
Jeffrey Sack of Lancaster House Publishing has endowed funds to provide an award for one or more full-time graduate students at the Centre for Industrial Relations. The annual income of the endowment will be awarded on the basis of academic performance and financial need. Value: approximately $3,700.
OSOTF

Landscape Architecture Endowment Scholarship
Awarded for excellence on the recommendation of the Faculty of Architecture, Landscape, and Design. The award is offered to two students, one completing the first year and one completing the second year of the Master of Landscape Architecture program. Application not required. Value: annual income.

J. Spencer Lanthier Award in Accounting
Awarded to an M.B.A. student with a focus an accounting.
OSOTF

Dr. Doris and Dr. Sam Lau Graduate Fellowship in Music
Ms. Doris Lau has endowed funds for award to a master's or doctoral student, on the basis of financial need, who demonstrates musical promise and good academic standing. Apply to the Faculty of Music. Value: annual income.
OSOTF

Doris Lau M.B.A. Fellowship in Finance
Awarded to M.B.A. students on the basis of information contained in the student application to the M.B.A. program. Students must plan to major in and/or establish their careers in finance; they must show financial need. Value: annual income.
OSOTF

Law Alumni Fellowship
Awarded on the basis of financial need and academic excellence to a graduate student in the Faculty of Law. Annual award: $10,000.

Robert Law Fellowship in Legal Ethics
Awarded annually to a graduate student(s) at the Faculty of Law with financial need demonstrating academic excellence and undertaking advanced research and study in the area of ethics and law. Recipients must be identified as having financial need. Value: annual income.

The Clifford Leech Prize
Friends and colleagues of Professor Clifford Leech have established a prize of $200 to be awarded annually for an outstanding Ph.D. thesis on a subject related to drama in either the Department of English or Graduate Centre for the Study of Drama.

Lieba Sharon Wilensky Lesk Graduate Scholarship in Jewish Studies
David Lesk and friends and family of Lieba Sharon Wilensky Lesk have endowed funds for award to a graduate student affiliated with the Jewish Studies program. Awarded on the basis of financial need; academic merit may also be considered. Application required. Value: annual income.
OSOTF

John Leyerle Bursary
Friends and colleagues of Dr. John Leyerle have endowed funds to provide a bursary for award to one or more full-time graduate students enrolled in the Centre for Medieval Studies. Awards are made on the basis of financial need and academic excellence. Value: annual income.
OSOTF

Department of Linguistics Graduate Award
Awarded on the basis of departmental guidelines to a graduate student in the Department of Linguistics. Value: annual income.

Department of Linguistics Graduate Fellowship
Awarded on the basis of financial need to a graduate student in the Department of Linguistics. Value: annual income.
OSOTF

George H. Locke Memorial Scholarship
Awarded in alternate years to an M.I.S. student. Preference will be given to a student with previous working experience in a public library. Value: income from the fund.

Dr. Michael Lutsky Graduate Fellowship in the Humanities
Awarded to a humanities student in the final stages of doctoral studies. Apply to the Humanities Centre, University College.

M.Arch. Admissions Fellowship for U of T Architecture Studies Graduates
Awarded on the basis of academic merit and promise of excellence in the profession of architecture to one or more students entering the Master of Architecture program directly from the University of Toronto Bachelor of Arts in Architectural Studies program. Value: annual income.

M.B.A. Fellowship for Social Entrepreneurs
An entrance award of $10,000 each year for an M.B.A. student (full-time, part-time, or Executive) who has demonstrated an enhanced commitment to, and respect for, social entrepreneurship. The recipient intends to take an entrepreneurial approach to producing positive social change in the community or country. Preference given to students who have volunteer or work experience in the public and voluntary (not-for-profit) sector. The award may be renewable over the course of the recipient's enrolment in the program, pending an annual review. Application required.

M.M.P.A. Class of 1999 Scholarship
Awarded to students in the Master of Management and Professional Accounting program based on financial need and academic standing.
OSOTF

M.M.P.A. Class of 2000 Scholarship
Awarded to students in the Master of Management and Professional Accounting program based on academic standing.

M.M.P.A. Class of 2001 Scholarship Endowment Fund
Awarded to students in the Master of Management and Professional Accounting program based on academic standing. Value: annual income.

M.M.P.A. Class of 2002 Scholarship Endowment Fund
Awarded to students in the Master of Management and Professional Accounting program based on academic standing. Value: annual income.

M.M.P.A. Class of 2003 Scholarship Endowment Fund
Awarded annually to students in the Master of Management and Professional Accounting program based on academic standing. No application required.

M.M.P.A. Expendable Awards
Awarded to students in the Master of Management and Professional Accounting program for academic achievement, leadership, standing on CMA exams and/or standing in case competitions.

M.M.P.A. Faculty Scholarship
Awarded to students in the Master of Management and Professional Accounting program. Conditions to be determined.

M.S.W. Scholarship Fund
Various donors have contributed to a fund, the annual income of which is awarded to an M.S.W. student on the basis of financial need. Apply to the Faculty of Social Work, Student Services.
OSOTF

Caroline MacDonald Bursary
Awarded to a student, preferably Oriental, who is proceeding to the second year of the M.S.W. program. Selection criteria include promise of leadership in Social Work, academic standing, and financial need.

Sir Ernest MacMillan Scholarship in Choral Conducting
Awarded anually to an outstanding student of choral conducting at the graduate level. Value: $2,000.

Agnes MacPhail Memorial Bursary
Applicants must be female candidates eligible for admission to the Master of Social Work program. Consideration is given to personal character, suitability for work in the field of Correction and Penology, and financial need. Apply to the Office of the Coordinator of Admissions, Faculty of Social Work, after fall registration. Value: annual income.

C. B. Macpherson Dissertation Fellowship
Through the generous donations of Professor F. Peers and other friends and colleagues of the late Professor C. B. Macpherson, an endowment has been established to provide an annual award to a graduate student in the Department of Political Science who has completed all non-thesis requirements for the Ph.D. and is actively engaged in dissertation research.
OSOTF

The Ian D. Macpherson Award
An award of approximately $1,500 has been established in memory of Ian D. Macpherson for a student registered in a master's program in planning whose work demonstrates both academic merit and practical problem-solving ability with respect to some aspect of planning. Apply in writing to Department of Geography.

The John Macrory Fellowship
The annual income from the estate of Mr. John Macrory provides a fellowship for award to a student enrolled in a Ph.D. or M.A. program in the humanities.

Joy Maines Memorial Bursary
Available to a student in either year of the M.S.W. program who is primarily interested in Social Policy, Social Planning, and Social Administration. The bursary is awarded on the basis of merit and financial need. Apply to the office of the Coordinator of Admissions, Faculty of Social Work, after fall registration. Value: $250.

Faculty of Management Alumni Entrance Scholarships
Awarded to outstanding applicants entering the M.B.A. program.

Rotman School of Management Alumni Association Fellowships
The Association has endowed a fund which provides an annual award of at least $1,000 for outstanding students entering the M.B.A. program.

Pamela Manson-Smith Travel Fellowship
Awarded on the basis of academic merit and financial need to a student in the Master of Landscape Architecture program. The award

will assist the student with a study tour in conjunction with his or her academic program. Apply to the Faculty Registrar by April 30. Value: approximately $500.

Manzu Scholarship
The Italian Bankers' Association has donated funds for award to doctoral students in the Department of History of Art, with preference given to those studying the work of the contemporary Italian artist Giacomo Manzu.

Patricia and Alan Marchment Graduate Student Travel Awards in History
The Marchments have endowed a fund whose annual income is awarded to a student or students in the Department of History. Eligibility is based on financial need and academic merit. Funds will be used by graduate students travelling to conferences or for field based research. Apply to the Department of History at any time throughout the year.
OSOTF

Maritime Life Entrance Scholarship
Awarded, on the basis of academic merit and financial need, to a full-time M.B.A. student entering the program for one year. Academic merit will be determined by GPA and GMAT score. Value: annual income.
OSOTF

The Nathan Markus Fellowship
In honour of Dr. Markus, a yearly award is available to a doctoral student at the University of Toronto. The award is based on high scholastic achievement, promise in conducting research, and an approved dissertation proposal in the field of gerontology. For further information or application, refer to the Dean of the Faculty of Social Work.

Lorna Marshall Doctoral Fellowship in Social and Cultural Anthropology
Lorna Marshall has endowed a fund, the income of which provides an annual award to a full-time doctoral student in social or cultural anthropology who has completed Examination II by March 31 in the year of the award. The award is to cover costs associated with the candidate's field work.

Oscar J. Marshall Graduate Fellowship
An endowment from the estate of Oscar Charles Joseph Marshall provides an award to a student graduating from the Geomaticd/Land Information Systems program at Erindale College who has obtained the highest **overall** average in years III and IV and who will be enrolling in graduate studies in Geomatics/Land Information Systems at the University of Toronto.

The Beverly & Emmerson Mascoll Graduate Scholarship
Awarded to a black Canadian resident/citizen who is a student in the M.S.W. program demonstrating good performance and financial need.
OSOTF

Master of Financial Economics Graduate Awards
Awarded to students in the Master of Financial Economics program based upon undergraduate/graduate record. Value: variable.

Master of Management and Professional Accounting Entrance Scholarship
Awarded to students who are enrolled in the first year of the M.M.P.A. program. The award will be presented to a first year M.M.P.A. student with superior academic standing upon entrance to the program. Value: $10,000 annually, to be divided between two to five recipients.

Joseph A. May Scholarship
Family, friends, and colleagues of the late Professor Joseph A. May have endowed funds, the income of which provides an annual award, on the basis of financial need, to an outstanding graduate student who has approached the study of the following fields from a qualitative rather than a quantitative perspective: history and philosophy of geographic thought, historical geography, social and cultural geography, geography of Canada.
OSOTF

Mamie May Graduate Fellowship in Performance
Awarded to an outstanding student in the graduate program in Performance or the Advanced Certificate in Performance. Apply through the Faculty of Music. Value: annual income.

A.Y. Elizabeth McCullough Scholarship
The estate of A.Y. Elizabeth McCullough has established a scholarship for award annually to a student in the Faculty of Information Studies. The scholarship is given on the basis of financial need. Apply to the Faculty of information Studies in the fall. Value: annual income.

Margaret S. McCullough Scholarship in Canadian Historical Research
The estate of the late Margaret Standish McCullough provides an annual scholarship for

award to one or more full-time doctoral degree students in the Department of History, pursuing postgraduate work in Canadian historical research. Value: annual income.

The Irene McDonald Bursary
The estate of Irene McDonald provides for an annual award to a graduate student from the Faculty of Social Work. Value: annual income.
OSOTF

The Graduate Anne McMaster Grant
Awarded to a student in the Department of Geography and Program in Planning for costs such as departmental field trips and field courses. Awarded on the basis of financial need; academic merit may also be considered.

The Graduate Anne McMaster OSOTF Award
Awarded to a student in the Department of Geography and Program in Planning for costs such as departmental field trips and field courses. Financial need must be considered; academic merit may also be considered.
OSOTF

Kenneth McNaught Fellowship in History
Awarded to students in the Department of History with preference given to M.A. students studying Canadian History. Based on academic excellence and financial need.
OSOTF

McPherson–Wells Scholarship in Health and Disability
Funds have been endowed to provide an annual award of at least $500 to a registered student in the Faculty of Social Work with a demonstrated interest, ability, and commitment to the areas of health and/or disability. Upon completion of enrolment, students may apply by September 15 to the Faculty of Social Work, Office of Student Services and Records.
OSOTF

Centre for Medieval Studies Alumni/ae Bursary
Awarded on the basis of academic excellence and financial need to a student in the Centre for Medieval Studies.

The Medieval Studies Travel Bursary
Awarded to graduate students in the Centre for Medieval Studies on the merit of their applications/proposals. A final report is to be submitted. Formal application required; there are two competitions each year. Value: variable.

The Medieval Studies Travel Bursary—OSOTF
Awarded to graduate students in the Centre for Medieval Studies on the merit of their applications or proposals. There are two competitions each year.
OSOTF

Centre for Medieval Studies Thirteenth Anniversary Award
Alumni and friends of the Centre for Medieval Studies have generously contributed to an award to provide annual income to one or more full-time graduate students enrolled in the Centre for Medieval Studies.
OSOTF

Noah Meltz Graduate Award
Friends and colleagues of Noah M. Meltz have established an endowment in recognition of the role he played as Director of the Centre for Industrial Relations from 1975-1985. The annual income will be awarded on the basis of academic merit and financial need to one or more graduate students enrolled at the Centre. Value: approximately $4,000.
OSOTF

Dr. Mercer Scholarship in Near Eastern or Islamic Studies
This scholarship is awarded annually with preference being given to a candidate who proposes to take up work in or for the Near East under the Department of External Affairs of Canada. Value: approximately $500.

Dorothy Milligan Bursary
The estate of Dorothy Milligan provides for a fellowship for award to a student in the Faculty of Social Work on the basis of financial need. Value: variable.

The Theodoros Mirkopoulos Fellowship in Composition
Awarded on the basis of financial need to a graduate student demonstrating excellence in composition and general academic achievement. Apply to the Faculty of Music. Value: annual income.
OSOTF

Mitsubishi Graduate Scholarship in Japanese Studies
Through an annual donation from Mitsubishi Canada Limited, a $2,000 award is available to a full-time M.A. or Ph.D. student of the Department of East Asian Studies in Japanese studies or graduate students in professional faculties

who intend to specialize in Japan-related subjects. Apply by April 30 to the graduate secretary of the Department of East Asian Studies.

The Lorne T. Morgan Fellowship
A fellowship has been established in memory of Professor Lorne T. Morgan who taught in the Department of Political Economy at the University of Toronto from 1930 to 1962. The income from the fund provides up to $1,000 for award annually to a full-time student in the Ph.D. program in Industrial Relations. M.I.R. students who have a strong research interest will also be considered. Preference will be given to those students who have completed undergraduate studies in economics, economics and political science, or commerce.

T. George Mulligan Memorial Scholarship Fund
Awarded to full-time M.B.A. students completing the first year of the M.B.A. program and planning to specialize in finance with an emphasis in financial analysis and/or portfolio management.

National Bank Financial M.B.A. Fellowship
Awarded to an M.B.A. student on the basis of academic merit and financial need. Value: annual income.

Marcia J. Nauratil Scholarship
Awarded to a full-time doctoral student in the Faculty of Information Studies whose principal area of research is social issues in librarianship. The award will be made primarily on the basis of academic standing, although financial need may be considered. Value: income from the fund.

Newman Scholarship
Scholarships totalling $6,000 are awarded based on demonstrated leadership qualities and work experience. $2,000 worth of bursaries are also available based on the above and demonstrated financial need. Apply to the Faculty of Social Work, Office of Student Services. Deadline: September 15 for the fall session.

Lucille Norris Fellowship
Awarded to a student undertaking graduate work at the Faculty of Law in the area of medical legal studies. Value: annual award of $2,500.

Edward W. Nuffield Graduate Travel Fellowship
Awarded to students pursuing a Ph.D. who must travel in order to conduct vital research.
OSOTF

John O'Grady Graduate Award
One or more awards are available from the annual income of an endowment established through the generous support of John O'Grady, a consultant specializing in labour market, human resources, and industrial relations issues. Graduate students at the Centre for Industrial Relations are eligible for the award which is based on academic merit and financial need. Value: approximately $3,700.
OSOTF

Ontario Association of Architects Scholarship
Two awards of $1,200 each. One scholarship is awarded to a student completing the second year of the Master of Architecture program, and one scholarship is awarded to a student completing the third year of the Master of Architecture program.

Ontario Association of Landscape Architects Scholarship
The Ontario Association of Landscape Architects has donated funds for awards of excellence to two students completing the first year of the Master of Landscape Architecture program. No application required. Value: two awards of $750 each.

Ontario Library Association/Grace Buller Aboriginal Student Scholarship
Awarded to a student enrolled at the Faculty of Information Studies who has self-identified as Aboriginal.

Ontario Library Association/OLTA Award
Awarded annually to the full-time or part-time graduate student who ranks highest in the Master of Information Studies program.

Dr. James Orbinski Fellowship in International Relations
Awarded to a student in the Collaborative Masters in International Relations program on the basis of academic merit. Financial need is also considered.

Belinda Sugarman Orling Memorial Fellowship
Berul and Edith Sugarman have endowed funds to award a student enrolled in any of the graduate programs at the Faculty of Architec-

ture, Landscape, and Design based on financial need and demonstrated academic merit. Application required.
OSOTF

Naomi Overend Fellowship in Human Rights
Awarded to a full-time graduate student in the Faculty of Law with a focus on human rights.

David and Lucile Packard Foundation Fund
The David and Lucile Packard Foundation makes an annual donation to graduate students in the Faculty of Law from Africa, Asia, Central and Eastern Europe, the Middle East, or Latin America. Priority is given to students undertaking advanced research and study in the area of reproductive health law. Apply to the Associate Dean of Graduate Studies, Faculty of Law.

Page + Steele Architects Planners Scholarship
Awarded to a student concluding the third year of the Master of Architecture program based on excellence in the third year courses and higher as well as demonstrated potential for leadership in the practice of architecture.

Irma and John Papesh Graduate Award
Made possible by the kind donation of Mrs. Irma Papesh, this fellowship is open to students whose research focus includes Slavic studies, with a preference for Czech and Slovak studies.
OSOTF

Para Paints Scholarship
Awarded to a student completing the second year of the Master of Architecture program who has achieved the highest accumulative grades in the two design studios. Application not required. Value: $500.

Beverly A. Parker Memorial Travel Award
Awarded annually to a graduate student in the Department of History of Art on the basis of financial need and high academic standing. Awarded on the recommendation of the Department Chair and restricted to travel support. Apply to the Chair, Department of Fine Art. Value: annual income.
OSOTF

L. Victor Pathe Graduate Award
Friends and colleagues of L. Victor Pathe have established an endowment in recognition of his contribution to labour–management cooperation. The annual income is awarded to one or more graduate students enrolled at the Centre for Industrial Relations on the basis of academic merit and financial need. Preference will be given to students with an interest in the area of innovative workplace practices. Value: approximately $3,700.
OSOTF

Alexander C. Pathy Graduate Award
One or two awards are made from the annual income of an endowment established through the generous support of Alexander C. Pathy who served the University of Toronto as Vice-President of Business Affairs, Vice-president of Human Resources, and as a professor of management and industrial relations. Graduate students at the Centre for Industrial Relations are eligible for the award which is based on academic merit and financial need. Value: approximately $3,700.
OSOTF

Florence Partridge Scholarship
Awarded to a student registered in the Faculty of Information Studies who has achieved high academic standing and demonstrates financial need.
OSOTF

Professor Emeritus Frank Peers Graduate Research Scholarships
Awarded to a graduate student in the Department of Political Science or in the Master of Arts in International Relations program (MAIR) on the basis of financial need. Application required.
OSOTF

David Perry Memorial Scholarship
Various donors have established an annual award for an undergraduate or graduate student, on the basis of financial need, who has shown excellence in studying connections between research and performance in early drama (before 1642). Value: $250.
OSOTF

Department of Philosophy Graduate Fellowship Fund
Awarded to students in the Department of Philosophy on the basis of academic excellence.

Arthur Plettner Graduate Fellowships
Awarded to outstanding students in graduate programs at the Faculty of Music. Apply through the Faculty of Music. Value: annual income.
OSOTF

Graduate Fellowship in the Department of Political Science
Awarded annually to a master's or doctoral student in the Department of Political Science. The

award is given on the basis of financial need and academic merit. Applications are not required unless used as a fellowship to aid in field research. Value: annual income.

Department of Political Science Graduate Scholarship Fund
Awarded to a graduate student in the Department of Political Science on the basis of financial need; academic merit may also be considered. Application required. Value: annual income.
OSOTF

Department of Political Science Student Award
Awarded to a graduate student in the Department of Political Science on the basis of financial need and academic merit. Value: annual income.
OSOTF

Dorothy J. Powell Graduate Scholarship in International Economics
Awarded on the basis of academic merit to a graduate student in the Department of Economics. Financial need may also be considered.

Vivienne Poy Chancellor's Fellowships in the Humanities and Social Sciences
One Chancellor's Fellowship (valued at $20,000 in 1996) and one fellowship valued at the remainder of the annual income in excess of the funds applied to the Chancellor's Fellowship are available. The Chancellor's Fellowship and the Fellowship are awarded to master's or doctoral students in a humanities and /or social sciences discipline defined by the Faculty of Arts and Science.
OSOTF

Viola Whitney Pratt Memorial Scholarship in English
An endowment from the estate of Mildred Claire Pratt provides an annual award to a full-time graduate student in the Department of English who best exemplifies the qualities of Viola Whitney Pratt: enthusiasm, creative imagination, and humility combined with a love for the English language.
OSOTF

Jane Prescott Memorial Prize
Awarded to the student who achieves the highest standing in the course "Online Information Retrieval" on the recommendation of the Faculty of Information Studies. Applications must be made to the Faculty of Information Studies by November of the year prior to the distribution of the prize. Value: $100.

Uno Prii Memorial Award for Excellence in Visual Communications
Awarded to a student completing the first year of the Master of Architecture program who has demonstrated excellence in three-dimensional visual communication.

Proscience Inc. Entrance Scholarship
Proscience Inc. has donated funds to provide one award, based on financial need, to a student entering the M.B.A. program. Preference is given to disabled students. Value: annual income.
OSOTF

Scholarship in Public Librarianship
Awarded to a second year student in the master's program in Library and Information Science. Student must demonstrate a career interest in the public library system and show high academic standing. Apply to the Faculty of Information Studies by November of the year prior to the awarding of the scholarship. Value: annual income.

Donald F. Putnam Graduate Scholarship
Awarded, on the recommendation of the Department of Geography and Program in Planning, to graduate students with outstanding achievements entering or continuing in a research oriented degree program. The **award is** made to students concentrating on physical and environmental geography. Application not required. Value: annual income.

Quadrangle Architects Tenth Anniversary Scholarship
Awarded, on the basis of financial need, to a student entering the third or fourth year of the Master of Architecture program. Academic achievement will also be considered. Eligible students should have completed outstanding design work in the area of multiple unit housing or the adaptive reuse of buildings, and show professional promise in one or both of these areas. Value: annual income.
OSOTF

REED Award in the Faculty of Arts and Science
Awarded to graduate students in the Faculty of Arts and Science who are participating in the Records of Early English Drama Project.

Arlene Perly Rae Award
Awarded on the basis of financial need to a M.S.W. or doctoral student who has demonstrated consistent academic achievement and has shown interest in the progress of the wider community through committee involvement, political activism, community service, or volunteerism.
OSOTF

Bob Rae Graduate Award
One or more awards are available to students in the Centre for Industrial Relations from the annual income of an endowment established through the generous support of friends and colleagues of Bob Rae. Value: approximately $8,000.
OSOTF

The Rare Books and Manuscripts Award
Awarded to a full-time Master of Information Studies student. The award is given to the student who ranks highest in the elective course "Rare Books and Manuscripts" and obtains a standing of at least A in that course and an average of not less than B+ in the program leading to the degree. Value: annual income.

The Sandhya Ray Award for Indian Philosophy and Religion
Dr. Ritendra Ray has endowed a fund, the annual income of which is awarded to a graduate student or students in good standing at the University of Toronto. The candidate(s) must demonstrate excellence in study or research in religion and/or the philosophy of India, preferably with special emphasis on humanism and spiritualism in ancient Indian philosophy. Eligible students may apply directly to the Centre for South Asian Studies or be recommended by a member of the academic staff of the University of Toronto. Award recipients are eligible to apply for the award in subsequent years.

Rebanks Family Fellowship
Awarded to a student of the Museum Studies program to support a summer internship between the student's first and second years in the program. The internship must be pursued at a small-sized Canadian museum or historic site (with at least three to five permanent employees). The institution must be a member of the Canadian Museums Association or an accredited provincial association. Application required.

Kathleen Reeves Memorial Award
The Special Libraries Association and friends of the late Kathleen Reeves have established a fund, the annual income of which is awarded to a full-time or part-time Master of Information Studies student. The award is given to the student ranking highest in the elective course, "Management of Corporate and Other Special Information Centres", obtaining a standing of at least A in that course and an average of not less than B+ in the degree program.

Heather M. Reisman Gold Medal in Design
Awarded to a graduating student from the Faculty of Architecture, Landscape, and Design in recognition of exceptional achievement in architectural design, landscape architecture, or urban design.

Heather M. Reisman Prize in Organizational Behaviour
Awarded to the student earning the highest standing in the mandatory Organizational Behaviour course in the M.B.A. program.

The Department for the Study of Religion Student Award
Awarded to a graduate student in the Centre for the Study of Religion to travel to a conference. Financial need and academic merit are considered. Value: annual income.
OSOTF

Graduate Scholarship in Reproductive Rights (and Women's Rights) for Developing Southern Countries and Countries in Transition
Awarded to students studying women's rights from developing southern countries and countries in transition.

Larry Wayne Richards, MOAA, FRAIC, AIA/IA Admission Fellowship
Awarded, on the basis of academic merit and promise of excellence in the architecture profession, to students entering the Master of Architecture program directly from the Bachelor of Arts in Architecture program, University of Toronto.
OSOTF

Centre for Medieval Studies A.G. Rigg Graduate Scholarship
Friends and alumni of the Centre for Medieval Studies have endowed funds for an award, on the basis of academic merit, to an outstanding graduate student either entering or continuing in the Medieval Studies program. No application required.

The Antony Roberts Graduate Fellowship
The friends and family of Antony Roberts have established a fellowship for award to a gifted graduate student entering the Faculty of Music. Based on financial need. Apply through the Faculty of Music. Value: annual income.

William Rock, Jr. Memorial Scholarship
Awarded to a student completing the second year of the Master of Landscape Architecture program who has attained an outstanding academic average with emphasis on design. Application not required. Value: annual income.

Mara Roebuck Memorial Graduate Prize in English
Sandy Rotman has generously contributed to an endowed fund, the annual income of which is awarded to an M.A. student in the Department of English. Preference is given to a student with an undergraduate degree from Woodsworth College. If no suitable Woodsworth College graduate is identified in any one year, the Prize will be awarded to another deserving student regardless of the institution granting the undergraduate degree. Financial need and academic merit will be considered.

Romanian Canadian M.B.A. Award
Awarded annually to a student entering the full-time M.B.A. program who received education in Romania. Recipients chosen on the basis of financial need and academic merit. No application required.

Rotman 2004 Non-Profit Internship Scholarship
Awarded to a student who has completed an internship in the non-profit field. Apply to the M.B.A. Program Services Office.
OSOTF

lain Ronald M.B.A. Fellowship in Finance
Awarded to a student entering the full-time M.B.A. program who plans to major in finance and/or establish a career in this field. The recipient will be selected on the basis of academic merit and financial need, Value: annual income.

Harvey Rorke Financial Foundation of Canada Ph.D. Fellowship
Awarded to one or more Ph.D. students on the basis of academic merit, on the recommendation of the Ph.D. Program Director and the Associate Dean of the Rotman School of Management. Application not required. Value: annual income.

Professor Albert Rose Student Emergency Bursary Fund
May be awarded to a M.S.W. or Ph.D. student who is in need of financial assistance due to circumstances beyond their control.
OSOTF

J. E. R. Ross Graduate Scholarship in Geomatics/Land Information Systems
Through donations from Mrs. Margaret E. Ross, an annual award of $1,000 is available to a candidate entering the first year of full-time graduate studies in Geomatics/Land Information Systems at the University of Toronto. The candidate must be a graduate of U of T having completed the Geomatics/Land Information Systems program at Erindale College with a grade average of at least B+ in the final year of full-time undergraduate study.

Helen J. Rotenberg Entrance Scholarship
Awarded to an international and/or domestic M.B.A. student interested in pursuing degrees at the Rotman School. The recipient must demonstrate a creative and integrative approach to investment management.

Royal Bank Graduate Fellowships in Applied Social Work Research
Awarded for research internships in the Centre for Applied Social Research (CASR) for students currently enrolled in the Ph.D. program in the Faculty of Social Work. Value: annual income.
OSOTF

Royal Bank Graduate Fellowships in Public and Economic Policy
Graduate students undertaking a course of study in the area of public and economic policy are eligible for this award. Financial need and **academic** merit will be considered. Value: variable.
OSOTF

Jukka-Pekka Saraste Graduate Fellowship in the Humanities
Gift of Barrie Rose, in honour of Jukka-Pekka Saraste, for humanities graduate students in the final stages of their doctorate. Apply by April 1 to the Humanities Centre, University College. Value: annual income.

David Savan Dissertation Prize
The estate of David Savan has endowed funds to provide an award for the best dissertation over the past three years in the Department of Philosophy. The dissertations will be judged on the basis of their contribution to philosophy in

general; the winning thesis will exemplify an exceptional mix of originality, rigour, and good writing.

Scace Graduate Fellowship in French
Awarded by the Faculty of Arts and Science on the basis of financial need and academic excellence to students enrolled in full-time graduate studies in the Department of French. The award may be held for a maximum of four years, but is limited to a maximum of two years at the master's level. Application required or candidates must be identified as having financial need, based on the University's criteria. Value: annual income.
OSOTF

Scace Graduate Fellowship in Opera
Awarded on the basis of financial need to two singers in the master's program in Performance or Opera. Apply to the Faculty of Music. Value: annual income.
OSOTF

Scace Graduate Fellowship in Tax Law
Awarded on the basis of financial need and academic excellence to graduate students studying tax law. Apply to the Faculty of Law. Value: annual income.
OSOTF

Benjamin Schlesinger Student Leadership Prize
Awarded to a graduating student who has made a significant contribution to student life at the Faculty of Social Work. Students, faculty, and administrative staff may submit nominations for this prize. Deadline: March of the winter session. Value: $100.

Scotia Capital Markets Bursary in Philosophy
Recipients must be continuing their studies at the graduate level in the year following receipt of the award. Financial need and academic merit will be considered. Offered by Admissions and Awards on the recommendation of the Chair of the Department of Philosophy. Value: annual income.
OSOTF

Janka Seydegart Scholarship in Feminist Studies
Awarded on the basis of financial need to a graduate student enrolled in the Graduate Collaborative Women's Studies (GCWS) program. The scholarship is awarded in alternating fashion, one year to a student from the Faculty of Social Work and the next year to a student from any other GCWS collaborating graduate unit. Academic merit is considered. Apply to the Institute of Women's Studies and Gender Studies. Value: annual income.
OSOTF

Stanislaw Seydegart Award in Gerontology and Aging
Awarded to a second year M.S.W. or Ph.D. student with financial need whose course work prepares the student for specialization in the field of aging, with emphasis on viewing aging issues from the perspective of the life course. The student should exemplify dedication to the field of gerontology and aging. Apply to the Office of Student Services and Records, Faculty of Social Work.
OSOTF

Irene Shapiro and David Shapiro Memorial Award
Awarded to a student enrolled at the Faculty of Social Work who shows a special interest in research regarding depression and suicide.
OSOTF

Ellen Shad Prize
Awarded to the student ranking highest in the course Research Collections in Canadiana in the Faculty of Information Studies.

Sheridan Park Association, Library and Information Science Committee Award
Awarded to a full-time or part-time student who has successfully completed either LIS 2132H Literature of Science and Technology or LIS 2158H Management of Corporate and other Special Information Centres. The award is based on academic merit and overall contribution to the class/program. Value: $250.

The Taras Shevchenko Memorial Scholarship
Through the generosity of The Ukrainian Canadian Committee, Toronto Branch, this award is given annually to a student in Ukrainian language in the Department of Slavic Languages and Literatures. Value: approximately $1,000.

Simmonds Graduate Fellowship in Memory of Sara Levi Godfrey
Awarded to an outstanding piano student in the master's program in Performance or the Advanced Certificate in Performance. Apply to the Faculty of Music. Value: annual income.

Zoltan Simo Graduate Fellowship in the Humanities
Awarded to a humanities student in the final stages of doctoral studies. Apply to the Humanities Centre, University College.

Sixtieth Anniversary Bursary
The bursary is awarded annually on the basis of financial need to a full-time student in any master's program at the Faculty of Information Studies. The bursary is tenable during the second term (January–April). Applications are available during the fall term. Value: income from the fund.

H. Gordon Skilling Fund
Various donors have endowed a fund to honour H. Gordon Skilling. This fellowship is open to graduate students affiliated with the Centre for Russian and East European Studies who are pursuing advanced study of a country in the region covered by the Centre's mandate.

J. A. D. Slemin Memorial Fellowship
S. C. Johnson and Son Limited has made funds available for a $2,500 fellowship renewable in the second year in the Rotman School of Management, for award to a first-year M.B.A. student who plans to major in marketing. Preference to be given to students with a law background.

Lawrence and Tracey Smith Family Bursary in Economics
Awarded, on the basis of financial need, to master's or Ph.D. students in the Department of Economics. Academic merit may also be considered. Value: annual income.
OSOTF

R. M. Smith Memorial Fellowship in Classics
The family and friends of R.M. Smith have established a fellowship for award, on the basis of academic merit, to a master's or doctoral student studying Classics. Value: annual income.
OSOTF

Margaret Florence Lockhart Snowden Bursary
The bursary is awarded on the basis of financial need and high academic achievement to an M.S.W. student. Apply to the Faculty of Social Work.
OSOTF

The Irene So Scholarship
Awarded to a registered M.S.W. student at the Faculty of Social Work on the basis of financial need. Apply to the Faculty of Social Work, Office of Student Services and Records. Value: annual income.
OSOTF

Social Work Alumni Scholarship
Awarded to a Master of Social Work candidate demonstrating outstanding ability in the first year of the M.S.W. program who enrols in the following session to continue in the second year. Application not required. Value: $500.

Department of Sociology Scholarship Fund
Awarded to a graduate student in the Department of Sociology on the basis of financial need. Application required. Value: annual income.
OSOTF

Hattie Aileen Sommerville Scholarships—OSOTF
Awarded on the basis of financial need to a female candidate entering the Master of Architecture program.
OSOTF

The Benjamin Sonshine Urban Planning Scholarship
Edward Sonshine has generously endowed funds, the income of which is awarded to a student entering the M.Sc.PI. program. The recipient must have completed a major or specialist undergraduate program in geography. Academic merit and financial need are also considered. Value: annual income.
OSOTF

Molly Spitzer Scholarship
The annual income from a bequest of the late Mrs. Esther Spitzer provides an award to a graduate student enrolled in a degree program in the Centre for the Study of Religion whose principal subject of study is Judaism.

C. P. Stacey—Connaught Graduate Fellowship
Awarded to graduate students with outstanding achievements entering a research-oriented degree program. Eligible students will be drawn from the Department of History. Value: annual income.

Gerald Starr Memorial Scholarship
This scholarship was established in memory of Gerald Starr who devoted his life to improving conditions for working people around the globe; it is a tribute to his career with the international Labor Organization in Geneva, Switzerland. Gerald Starr graduated from the University of Toronto with an undergraduate degree in com-

merce, and master's and Ph.D. degrees in economics. This annual scholarship is awarded on the basis of financial need and academic performance to a full-time graduate student enrolled at the Centre for Industrial Relations. OSOTF

Joseph S. Stauffer Foundation Graduate Fellowship
Awarded to an outstanding student in any graduate program or the Advanced Certificate in Performance. Apply through the Faculty of Music. Value: annual income.

Jan and Georgina Steinsky-Sehnoutka Graduate Award in Czech Studies—OSOTF
For award, based on financial need, to a master's or doctoral student whose research focuses on the Czech Republic. The award is intended primarily for a student whose research focuses on the business and economic history of the Czech Republic. In the absence of an eligible candidate, the award may also be given to a student whose research includes the history, linguistics, politics, law, sociology, anthropology, demography, or geography of the Czech Republic. Value: annual income.
OSOTF

Nathan Strauss Q.C. Graduate Fellowship in Canadian Constitutional Law
Awarded to a student enrolled in the LL.M. or S.J.D. program interested in studying the implications of social and/or technological change for the practice of law.

Nathan Strauss Q.C. Essay Prize in Legal Ethics
Awarded to a full-time student in the J.D. or other graduate program in the Faculty of Law who produces an essay of exceptional merit on any issue relating to legal ethics or professional conduct which is published or in the process of being published by the Faculty of Law Review or the University of Toronto Law Journal.

The George Tatham/Geography Alumni Graduate Scholarship
Awarded, on the basis of academic merit, to full-time graduate students in the Department of Geography and the Program in Planning. Value: annual income.

Ernest Tauber Scholarship
This award is offered to the best undergraduate or graduate student, in alternating years, on the recommendation of the Department of Slavic Languages and Literatures. Value: annual income.

Duncan Taylor Memorial Award
The Canadian Energy Research Institute and friends and colleagues of Mr. Duncan Taylor have endowed a fund to provide for an annual award to a second year M.B.A. student with high academic standing in the area of forecasting techniques and/or econometric methods.

H.S. Thurston Fellowship in Policing and Organized Crime
Awarded to a student registered in the Centre of Criminology's master or doctoral program who has:
1. prior experience as a police officer and intends to pursue studies relating to an aspect of policing, police administration, or law enforcement, or
2. an outstanding academic record and intends to pursue studies and research on the detection, prosecution or prevention of organized crime, and law enforcement, including securities fraud, money laundering, and local, national, and international cooperation among police forces. Value: annual income.

Alfred P. Tilbe Scholarship
Awarded to a student completing the second year of the Master of Architecture program who achieves overall excellence and exhibits potential for leadership in the field. Awarded on the recommendation of the Faculty of Architecture, Landscape, and Design. Value: annual income.

Alfred P. Tilbe Memorial Fellowship in Professional Practice
Awarded to a student completing the third year of the Master of Architecture program who has achieved excellence in professional practice within the program. Value: annual income.

David Y. Timbrell Award
For award to one full time graduate student in the field of music theory or musicology on the basis of financial need. Value: annual income.
OSOTF

Alan Tonks Planning Scholarships
Friends and colleagues of Alan Tonks, former Chairman of Metropolitan Toronto, have endowed funds for one to four students entering their second year of the M.Sc.PI. program. The awards are based on academic merit and given to students concentrating their studies in the areas of urban planning, urban transportation, or urban infrastructure. Under exceptional circumstances, an award may be made to an incoming first year student. Financial need may also be considered.

J. Michael Toohey Memorial Scholarship
In memory of the former CEO of Amdahl Canada Ltd., a $2,500 scholarship is awarded annually to a continuing full-time M.B.A. student who, at the end of first year, has attained at least B+ academic standing; demonstrated outstanding leadership abilities; and made a significant, enriching contribution to the educational experience of his/her classmates. Apply to Awards Officer, Rotman School of Management.

Toronto Area Archivists Group Award
Awarded to a full-time or part-time student with the highest academic achievement in the Archival Studies stream of the M.I.St. program in the Faculty of Information Studies.

Toronto Polish–Canadian Hall Award
The award is offered biennially to undergraduate or graduate students in the Department of Slavic Languages and Literatures. Graduate students must be enrolled in a program leading to a doctorate in Polish literature or linguistics. Value: cumulative income.

Toronto Society of Architects Scholarship
The Toronto Society of Architects has donated funds for award to a graduating student in the M.Arch. or M.U.D. program, whose thesis project demonstrates an innovative approach to city building and urban form. No application required. Value: $1,000,

Jean Arnold Tory Bursary
The estate of Kathleen Jean Tory has established an endowment, the income of which will provide a bursary to a graduate student in the Department of Italian Studies on the basis of financial need. Apply to the Graduate Office, Department of Italian Studies.

Prudence Tracy Award in Medieval Studies-OSOTF
Awarded to a full-time graduate student in the Centre for Medieval Studies on the basis of financial need. Academic merit will also be considered.
OSOTF

Prudence Tracy Scholarship in Medieval Studies
The University of Toronto Press and friends of Prudence Tracy have endowed a fund which provides $1,000, awarded on academic merit, for a full-time graduate student in the Centre for Medieval Studies.
OSOTF

Travelling Fellowship for History Graduate Students
For award, on the basis of financial need, to a doctoral student in the Department of History. The award is given to a student who requires financial support to travel to conduct research or present a paper at an academic conference. Apply to the Coordinator of Graduate Studies, History Department. Value: annual income.
OSOTF

Trenwith and Galipeau French Linguistics Fellowship
Awarded to a graduate student studying French linguistics. Academic merit is the primary criterion. Financial need may also be considered. Eligible students are selected from the Department of French. Application not required. Value: annual income.

Trow Scholarship
Awarded to the student entering the M.Arch. program, based on financial need and demonstrated talent and skills in computation and technical concerns.
OSOTF

Eszter Turchanyi Memorial Bursary
Awarded to a student registered in a master's level program at the Faculty of Information Studies. Preference given to a student with financial need who immigrated to Canada. Apply to the Registrar, Faculty of Information Studies, in the autumn of each year. Value: annual income.
OSOTF

Dr. Roman Turko and Yaroslawa Turko Scholarship in Ukrainian Studies
Funds from the estate of Yaroslawa Turko have been used to establish a fellowship for award to undergraduate or graduate students studying courses related to the Ukraine. The award is based on financial need; however, academic merit will also be considered. Value: annual income.
OSOTF

William Osborn Twaits Fellowship
The estate of the late William Osborn Twaits provides three or four awards amounting to the total of annual income to Ph.D. students undertaking full-time graduate work in the Rotman School of Management. Awarded on the basis of financial need and academic merit.
OSOTF

Jane Tyerman Award
Various donors have provided funds to offer an annual award to an Executive M.B.A. student in his/her final year who has contributed the most to the learning experience in his/herr class in all aspects of the program.

Tzu Chi Bursaries in Social Work
The Buddhist Compassion Relief Tzu Chi Foundation has provided funds to award five bursaries annually, on the basis of financial need, to students enrolled in the Faculty of Social Work who are Canadian citizens or permanent residents, have at least a 6 average and who are active in the community or in a charitable organization. Apply to the Faculty of Social Work by November 1.

The U of T - CEU Graduate Student Exchange Program
Awarded to graduate students participating in an exchange program between the University of Toronto and Central European University. Students from one university visit the other for one semester to continue their studies. Application required. Value: annual income.

The Ukrainian Heritage Association and Museum of Canada Award in Museum Studies
An award is offered from the annual income of an endowment established by the Ukrainian Heritage Association and Museum of Canada to a student in the second year of the Museum Studies program with a demonstrated research interest in some aspect of museums and history and/or culture of Ukrainians in Canada. Value: approximately $1,000.

The Shirley Uldall Memorial Book Prize
Awarded to a student with financial need in the Centre for South Asian Studies.
OSOTF

University of Toronto Canadian Credit Management Foundation (CCMF) Fellowship
For award, on the basis of financial need, to M.B.A. and Ph.D. students at the Rotman School of Management. Academic merit will also be considered. Value: annual income.
OSOTF

University of Toronto Foundation Graduate Award
Awarded on the basis of financial need to senior doctoral students attending a conference to present a paper. Award is limited to senior doctoral students in the Humanities or Social Sciences (awarded annually on an alternating basis). Preference is given to students completing their degree in 5 years or less. Students receiving other conference travel awards are not eligible. Nominations should come from the applicant's graduate unit. Applicants must provide a statement to SGS outlining the purpose of the travel and a letter of support from their supervisor. Deadline: end of April. Approximate value: $600 or the cost of travel, whichever is less.
OSOTF

University of Toronto Leon Pape Memorial Scholarship
For award to a graduate student enrolled at the Rotman School of Management on the basis of financial need. Value: annual income.
OSOTF

The University of Toronto Planning Alumni Graduate Scholarship
Awarded, on the basis of academic merit, to graduate students enrolled in full-time studies in the Department of Geography and the Program in Planning. Value: variable.

University of Toronto PricewaterhouseCoopers M.B.A. Fellowship
Annual income awarded, on the basis of academic merit and involvement in the community or undergraduate school, to a student entering the full-time M.B.A. program. Scholarship available only to Canadian citizens. Value: approximately $7,500 per year.

University of Toronto Women's Association
Awarded on the basis of academic merit to a full-time U of T graduate student(s) pursuing doctoral work in the humanities. Preference will be given to a student(s) nearing dissertation completion. Applicants must be nominated by their graduate unit. Deadline: end of April. Approximate value: $500.

Edward Johns Urwick Memorial Scholarship
Awarded to a Social Work student, preferably from a rural community, on the basis of merit and financial need. Apply to the Office of the Coordinator of Admissions, Faculty of Social Work, after fall registration. Value: annual income.

Arthur Vaile Memorial Graduate Prize in Jewish Studies
Sandy Rotman has generously endowed funds to provide an annual award to graduate students in Jewish Studies. Financial need and academic merit are considered.
OSOTF

George and Helen Vari Fund
Awarded, on the recommendation of the Director of the Centre for Russian and East European Studies, to graduate students participating in the University of Toronto - Central European University Graduate Student Exchange Program. Application required. Value: annual income.

Verma Graduate Award
One or more awards will be made from the annual income of an endowment established through the generous support of the following members of the Verma family: Mahendra, Yoga Shakti, Anil, Savita, Ranjan, Veena, Vikash, Eileen, Arvind, and Ashok. Graduate students at the Centre for Industrial Relations will be eligible for the award which will be based on academic merit and financial need. Value: approximately $5,000.
OSOTF

Vetter Emergency Fund
Awarded to registered students in the Faculty of Social Work in need of financial assistance due to unforeseen circumstances. Apply to the Faculty of Social Work, Office of Student Services and Records. Value: variable.

Stephen Vickers Memorial Award
Awarded to a graduate student in the Department of Fine Art. Financial need and academic merit are considered. Apply to the Chair, Department of Fine Art. Value: annual income.
OSOTF

Richter Usher Vineberg Leadership Scholarship Endowment Fund
Awarded to students in the Master of Management and Professional Accounting program who display leadership and academic achievement.

Susan Waintman Memorial Prize
Awarded to a student registered in the master's program in the Faculty of Information Studies. Preference given to a student in financial need.

Peter Walker First Year Planning Scholarship
Mr, Peter Walker, Walker Nott, Dragicevic Associates Limited, alumni, family, friends, and colleagues of the graduate planning program have all contributed to establish this fellowship. For award annually to at least one student entering the second year of the MSc. (Planning) program. Value: annual income.
OSOTF

Ward Bursary
One or more bursaries are available to M.S.W. students in need of financial assistance. Awarded on the recommendation of the Council of the Faculty of Social Work. Application not required. Value: up to $600/academic year.
OSOTF

Peter Warrian Graduate Award
One or more awards will be made available from the annual income of an endowment established through the generous support of Peter Warrian. Graduate students at the Centre for Industrial Relations will be eligible for the award which is based on academic merit and financial need. Value: approximately $3,700.
OSOTF

William Waters Award
Provides emergency assistance to students enrolled in any of the Rotman School's programs. The awards help recipients to meet unanticipated expenses that might otherwise prevent them from completing their programs. Individual awards vary in value based on the recipient's needs. Apply to the M.B.A., E.M.B.A, or Ph.D. programs office at any time during the academic year. Value: variable.
OSOTF

Gordon M. Watson Entrance Award
For award, on the basis of financial need, to a student entering **the** M.B.A. program who has successfully completed the Canadian securities course, or equivalent and has work experience in the field of finance, investment or securities analysis. Value: annual income.
OSOTF

Jules F. Wegman Fellowships
The estate of the late Mrs. Minnie Wegman provides annual fellowships, based on academic merit, to graduate students in the Faculty of Architecture, Landscape, and Design. No application required. Value: annual income.

John Weinzweig Graduate Scholarship
John Weinzweig and friends have endowed a fund in the Faculty of Music to provide an annual award to a graduating student in composition in the Mus.M. or Mus.Doc. program who exhibits extraordinary creative talent.

Hilary M. Weston Medal
J. Robert S. Prichard and Ann E. Wilson have endowed funds for an annual award at graduation to the student(s) achieving the highest academic standing in the Master of Social Work

program in the graduating year. Apply to the Faculty of Social Work.

Lynn R. Williams Graduate Award
An endowment has been established by the United Steelworkers of America in honour of the many contributions made to the trade union movement in Canada and abroad by Lynn R. Williams. Williams served the Steelworkers as Director for Ontario and Western Canada from 1973–1977, as International Secretary-Treasurer from 1977–1983, and as International President from 1983–1994. The award is based on academic merit, financial need, and the candidate's interest in working on issues of workplace fairness and social justice. Application and further information is available from the Centre for Industrial Relations. Value: approximately $3,750.
OSOTF

H. W. Wilson Scholarship
Awarded annually to one or two students in the first year of the M.I.S. program with high academic standing. Value: $1,000.
OSOTF

The Hilda Wilson Fellowship in Technology, Information, and Culture
This award is given to a graduate student whose work focuses on investigations begun by Harold Innis, Eric Havelock, Marshall McLuhan, and other Toronto scholars on the impact of technology on culture. Awarded by the Faculty of Information Studies. Value: annual income.
OSOTF

William John Witemberg Scholarship
The estate of Roma Elizabeth Jane Ower, daughter of William John Witemberg, has established an award for master's or Ph.D. students in the Department of Anthropology.

Chancellor Rose Wolfe Scholarship and Native Student Fund
Friends of Rose Wolfe have endowed a fund, the income of which provides two awards for native graduate students in the Faculty of Social Work. The award is based on proven scholastic ability; financial need may be taken into consideration. Apply to the Faculty of Social Work by September 15.
OSOTF

Roger N. Wolff Prize
Various donors have provided funds to offer an annual prize to a graduating M.B.A. student with the highest overall grade point average (GPA) in the academic year.

Women in Capital Markets (WCM) Heather L. Main Memorial Scholarship
Women in Capital Markets annually donates $5,000 to first year full-time M.B.A., or third year LL.B./M.B.A. female students available to work a summer internship and finishing their programs the following academic year. Apply through the Joseph L. Rotman School of Management.

Women's Canadian Historical Society of Toronto Graduate Fellowships in Canadian History
The Women's Canadian Historical Society has generously endowed funds to provide four annual awards of $2,500 to outstanding Canadians or permanent residents of Canada who enter the master's or doctoral program with a specialization in Canadian History in the Department of History at the University of Toronto.

Women's Musical Club of Toronto and Women's Musical Club of Toronto Centennial Foundation Fellowship
Awarded to an outstanding master's or doctoral student in Performance (Music) who is a Canadian citizen or landed immigrant. Excellence in performance and academics considered. No application required.

Graduate Scholarships in Women's Rights
Awarded to graduate students in the Faculty of Law from Central or South America, Africa, the Middle East, East or South East Asia with an interest in women's rights. Apply to the Associate Dean, Graduate Studies at the Faculty of Law. Value: annual income.

Simon Woo Scholarship
Awarded to a graduate student in the Faculty of Social Work. Apply to the Faculty of Social Work, Office of Student Services and Records.
OSOTF

A. S. P. Woodhouse Prize
The A.S.P. Woodhouse Prize is awarded annually to the writer of an outstanding thesis in the Department of English.

Jean Eleanor Ross Woodsworth Bursary
Family, friends, and admirers of the late Jean Woodsworth have endowed a fund to establish an award for a graduate student enrolled at the Faculty of Social Work with a demonstrated interest in the area of seniors, women, or Canadian social policy. Value: annual income.
OSOTF

Institute for Work and Health Scholarship
This annual award has been established to assist graduate students studying at the Centre for Industrial Relations. Awarded on the basis of academic performance and financial need, preference will be given to students who have demonstrated past interest or expect to pursue work in the area of work and health.
OSOTF

John Yamada Memorial Admission Scholarship and Study Abroad Bursary
An admission scholarship of $500 is awarded to a student entering the first year of the Master of Architecture program on the basis of ranking by the Admissions Committee on behalf of the Faculty of Architecture, Landscape, and Design. A study abroad bursary is also awarded to student(s) seeking to participate in the Study Abroad program of the four-year Architecture program, based on financial need. Bursary Application Form required.

The Yip Scholarship
Awarded to an international Ph.D. student, preferably from China, who is studying at the Faculty of Social Work.

Edie Yolles Prize in Urban Planning
Awarded annually to a student graduating from the Planning program, on the basis of financial need. Preference given to students of merit who demonstrate a comprehensive approach to planning and who have acquired the necessary skills. Application required. Value: annual income.
OSOTF

George Paxton Young Memorial Prize in Philosophy
Income from funds for this award, first established in 1894, will be distributed among those students in graduate programs in Philosophy who have read papers at philosophy conferences during the previous year.

The Eberhard Zeidler Scholarship
Awarded to a student concluding the first year of the Master of Architecture program on the basis of academic achievement in design in the first and second sessions of the first year.

AWARDS IN THE MATHEMATICAL, PHYSICAL, BIOLOGICAL AND APPLIED SCIENCES

Ontario Graduate Scholarships in Science and Technology (OGSST)
The Ontario Graduate Scholarships in Science and Technology (OGSST) program is designed to encourage excellence in science and technology graduate studies. The program is supported through funds provided by the Province of Ontario and raised by the University of Toronto in the form of private sector endowment. Each OGSST is named after the donor in recognition of the donor's generous support.

Each award has a value of $15,000 per year or $5,000 per session.

Applicants are required to submit the completed OGS application to the graduate units sponsoring the program (most departments in Physical and Life Sciences have OGSST). Check the deadline with the department sponsoring the award program.

Listed below are the OGSST at the University of Toronto. For brevity, the names are shortened from the "The Government of Ontario /John Doe Graduate Scholarship in Science and Technology" to the "John Doe Scholarship". The following format is used:

Department or Field of Study
Name of Award

Aerospace Engineering
MD Robotics Graduate Scholarships

Addiction Studies Collaborative Program
H. David Archibald Graduate Scholarship

Arthritis Centre
Edward Dunlop Foundation Scholarship

Astronomy
Walter John Helm Graduate Scholarship
Ontario Graduate Scholarships (CIAR)

Biology/Plant Molecular Biology
Joan M. Coleman Scholarship

Botany/Plant systematics
Charles E. Eckenwalder Scholarship

Botany/Zoology/Biology
Dr. F. M. Hill Scholarship

Centre for the Study of Pain
Purdue Pharma Graduate Scholarships

Chemical Engineering
DuPont Canada Scholarship
Richard Quittenton Graduate Scholarship

Chemical Engineering/Mechanical & Industrial Engineering
William and Dorothy Palm Graduate Scholarship

Chemistry
F.E. Bearnish Graduate Scholarships
Edwin Walter and Margery Warren Graduate Scholarship

Chemistry (biological/medicinal chemistry)
Dina Gordon Malkin Graduate Scholarship

Chemistry (phosphine chemistry)
Digital Specialty Chemicals Graduate Scholarship

Chemistry (physical chemistry of materials)
Martin Moskovits Graduate Scholarship

Civil Engineering/Chemical Engineering/ Materials Science and Engineering
Robert M. Smith Memorial Graduate Scholarship

Civil Engineering
Doherty Family Graduate Scholarship
William A. Doherty Scholarship
Alexander Drummond Scholarship
Paul and Suzana Price Scholarship

Clinician-Scientist Training Program
Medicine/Institute of Medical Science Graduate Scholarships
Dr. Arnie Aberman Graduate Scholarship

Computer Science
Ontario Graduate Scholarships in Science & Technology(Computer Science)

Dentistry
Seymour Bresalier Graduate Scholarship
Harry Dodick Graduate Scholarship

Electrical and Computer Engineering
Ricoh Canada Graduate Scholarship
Gordon Slemon Scholarship
Montrose Werry Scholarship

Electrical Engineering/telecommunications
ISS '97: World Telecommunications Congress Graduate Scholarship

Electrical/Biomedical/Aerospace Engineering
Thomas Noakes Graduate Scholarship
Victoria Noakes Graduate Scholarship

Emergency Medicine/pre-hospital care
Sunnybrook Prehospital Care Program Graduate Scholarship

Engineering
Denis Bouclin Graduate Scholarship
Class of 4T7 Graduate Scholarship
Lewfam Foundation Graduate Scholarship

Fores try
Alpa Lumber Inc. Graduate Scholarship
Buell Graduate Scholarship
Network Forest Products Limited: John and Rose Ziner Graduate Scholarships

Geography/Physical Geography
William G. Dean Graduate Scholarship

Geography/Spatial analysis/applied GIS
ESRl Canada Scholarship

Geology
Canadians Resident Abroad Foundation Graduate Scholarship
J. J. Fawcett Graduate Scholarship

Geophysics
Lamontagne Geophysics Graduate Scholarship

Geophysics, Applied
Harold O. Seigel Graduate Scholarship

Haematology/oncology
Dr. Dina Gordon Malkin

Heart and Stroke/Richard Lewar Centre
Heart and Stroke Foundation of Ontario Scholarship

Immunology
Aventis Pasteur Graduate Scholarship

Institute of Medical Science/Psychiatry Research
Gregory M. Brown Graduate Scholarship

Laboratory Medicine and Pathobiology/arthritis research
Canadian Arthritis Network Graduate Scholarship

Mathematics
Sir Lyman P. Duff Scholarship
Lloyd George Elliott Graduate Scholarship
Israel Halperin Scholarship

Steve Halperin Scholarship
Mathematics Alumni Scholarship

Mechanical & Industrial Engineering/Civil Engineering/Chemical Engineering/Materials Science and Engineering
John and Carol Northwood Graduate Scholarship

Mechanical & Industrial Engineering
Peter J. Irvine Graduate Scholarship
Mart Liinve Graduate Scholarship
Herbert A. Staneland Graduate Scholarship
Bez Tabarrok Memorial Graduate Scholarship

Medical Biophysics
Sunnybrook and Women's College Health Science Centre

Medicine/Public Health/Health Policy, Management & Evaluation
Medicine/Community Health

Materials Science & Engineering
Eleanor and Burnett Thall Graduate Scholarships

Mineral Engineering
George Gladstone Gilchrist Graduate Scholarship
Margery Sheridan Graduate Scholarship

Nursing
University of Toronto Foundation Graduate Fellowship
William and Dorothy Palm Graduate Scholarship

Nursing/cardiac or stroke research
Heart & Stroke Foundation of Ontario Graduate Scholarships

Nursing/mental health
Centre for Addiction and Mental Health Graduate Scholarship

Obstetrics and Gynaecology
Pharmacia Canada Inc./Genesis Research Foundation/OBGYN Graduate Scholarship

Occupational Therapy or Surgery
Patty Rigby & John Wedge Graduate Scholarship

Orthopaedic Surgery
David E. Hastings Graduate Scholarships

Parkinson's disease research
Grace Lumsden/Margaret Nichols Graduate Scholarship

Parkinson's/neurodegenerative disease research
Paul and Adelle Deacon Graduate Scholarship

Pharmaceutical Sciences
Merck Graduate Scholarship
Parke-Davis Graduate Scholarship

Physics
Reginald A. Blyth (Physics) Graduate Scholarship

Physics/Applied Geophysics
Reford Graduate Scholarship

Physiology
R. Howard Webster/Genesis Research Foundation/Physiology Graduate Scholarships

Physiology/Medicine
Physiology/Medicine Graduate Scholarship

Public Health Sciences
Inge and Ralf Hoffmann Graduate Scholarship
Public Health Sciences Graduate Scholarships

Public Health/Biostatistics Program
Aventis Pasteur Limited/John G. FitzGerald Graduate Scholarship

Public Health/Health Administration in community mental health care delivery services
Mary Beck Graduate Scholarship

Statistics
Reginald A. Blyth (Statistics) Graduate Scholarship

Surgical Scientist Program
Wellesley Surgeons Graduate Scholarships

Urology/Surgical Scientist Program
William K. Kerr Graduate Scholarship

UTM/Biotechnology or related fields
Pharmacia & Upjohn Graduate Scholarship

Zoology
Sherwin S. Desser Graduate Scholarship

Acres Productive Technologies Inc. - Joseph Yonan Memorial Fellowship
Awarded to graduate students showing academic excellence and financial need. Eligible students will be drawn from the Department of Computer Science. Value: annual income.

Alcan Fellowship
This award is offered to any graduate student who has been admitted to the School of Graduate Studies at the University of Toronto in a master's/doctoral program in mathematics or pure or applied science. Preference will be given to those in the field of metallurgy or materials science. The award is valued at $10,000. The student's academic record and other qualities which may lead to a successful career in industrial research will be considered.

Management of this program is provided by appropriate Alcan staff at either the Kingston Laboratories, or the Laboratoires de recherche appliquee et Centre de genie experimental, of Alcan International Limitee, in Arvida. Alcan will contact the fellowship holder shortly after the appointment to arrange a mutually convenient visit to the laboratories to discuss the research.

Alumni Graduate Studies Award
Through a donation of the Pharmacy Alumni Association, an annual award of $5,000 is available to a Pharmacy graduate, preferably from a Canadian university, enrolled in the M.Sc. or Ph.D. in Pharmaceutical Sciences.

American Women's Club of Toronto Scholarship in Speech Pathology
Awarded, on the basis of academic excellence, to graduate students in the Faculty of Medicine, Department of Speech-Language Pathology, Master of Health Science program.

Valerie Anderson Graduate Fellowship
Awarded on the basis of academic merit (research and course work) to an outstanding graduate student in any sub-discipline of Botany. Any member of the Department of Botany may make nominations. The Department's Graduate Studies Committee selects the recipient. Value: annual income.

Kathleen Arpin Doctoral Fellowship
An admission award is offered, on the basis of academic merit, to a full-time, incoming doctoral student in the Department of Nursing Science. Application not required. Nomination is made by the Faculty of Nursing Awards Committee. Value: $2,500 or annual income.

Mary Jane Ashley Award
Friends and colleagues of Dr. Mary Jane Ashley have endowed funds, the income of which provides an award to a student undertaking a program of study in the Graduate Department of Public Health Sciences who is also enrolled in the Collaborative Program in Addiction Studies. Value: annual income.

Department of Astronomy Bursary
Awarded to graduate students in the Department of Astronomy on the basis of financial need. No application required.

Carl E. Atwood Graduate Award in Zoology
Family, friends, and colleagues of Professor Carl E. Atwood have established a scholarship for award to a master's or doctoral student studying in Zoology. Value: annual income.
OSOTF

D. L. Bailey Award
The family of Dr. D. L. Bailey has provided funds for a $100 annual award for the best Ph.D. proposal presentation by a graduate student in the Department of Botany.

Bank of Montreal Fellowship in Medical Research
Through a generous gift from the Mount Sinai Hospital Foundation of Toronto, a scholarship has been established for award, on the basis of financial need, to a student in the Faculty of Medicine. Value: annual income.
OSOTF

Banting and Best Diabetes Centre—Novo Nordisk Award
Awarded, on the basis of financial need, to students in the Faculty of Medicine who are affiliated with the Banting and Best Diabetes Centre. Value: variable
OSOTF

Dr. Robert Duff Barron Graduate Scholarship in Public Health Policy
Awarded to a graduate student enrolled in the M.H.Sc. program in the Department of Health Policy, Management and Evaluation on the basis of academic excellence and leadership in public health policy. Value: annual income.

Dr. P. K. Basu Fellowship in Corneal Research/Eye Bank
Awarded to graduate students in the Department of Ophthalmology on the basis of financial need. First preference will be given to students pursuing studies in corneal research or eye banking. Second preference will be given to

students pursuing studies in vision science research. Apply to the Department of Ophthalmology. Value: annual income.
OSOTF

The F. E. Beamish Prizes
Three prizes are awarded annually to students for outstanding graduate work, evidenced by a seminar or performance on examinations, in analytical chemistry, inorganic chemistry seminar, and physical chemistry seminar.

Bell Canada Entrance Scholarship
Awarded, on the basis of academic merit, to new full-time graduate students in the Master of Engineering in Telecommunications program.

Gwen Bell Endowment Fund
Awarded to an occupational therapist entering the Department of Rehabilitation Science based on academic merit and area of research, preferably one that has an application for everyday practice.

The Norman Bethune Awards
Mr. Frederick H. Kahan has donated funds to establish two annual awards. One award is for a graduate student in the first two years of a Ph.D. program in microbiology, and the second award to microbiology residents in the first or second year microbiology program in the division of infectious diseases. Apply to Chair, Department of Molecular and Medical Genetics (microbiology program).

Paul Biringer Graduate Scholarship
Awarded to a master's or doctoral graduate student in Electrical and Computer Engineering. Preference will be given to an international student. Apply to the Department of Electrical and Computer Engineering. Value: annual income.

Bloorview Children's Hospital Foundation Graduate Award
An annual award of $1,500 is offered to a student who is entering the second year of a master's program in the Graduate Department of Nursing Science and has a clinical interest in physically disabled children and young people. Applications must be submitted by March 31 to the Graduate Department of Nursing Science.

Blyth Fellowship
Awarded to a student in the Department of Mathematics according to the terms and conditions of the University of Toronto Fellowship.

Physics Blyth Fellowship
Awarded to a student according to the terms and conditions of the University of Toronto Fellowship.

Boehringer Ingelheim Prize
Boehringer Ingelheim (Canada) Ltd. sponsors an award for a third, fourth, or fifth year graduate student in the field of organic synthesis or bio-organic chemistry. Candidates must have research published; financial need is considered. Apply to the Graduate Office of the Department of Chemistry by November 30. Value: annual income.
OSOTF

Dr. Claire Bombardier Award for Excellence in Clinical Epidemiology
Awarded to one graduate student enrolled in Clinical Epidemiology and Health Research, Department of Health Policy, Management and Evaluation, Faculty of Medicine, whose field research or written report has been judged as the best by the Clinical Epidemiology Executive Committee. The awardee will be encouraged to make an oral presentation at appropriate academic forums.

The Ruth Bradshaw Award
Colleagues and friends of Ruth Bradshaw, former Director of the Division of Physical Therapy, have established an award, given on the basis of financial need, for a full-time student enrolled in the first year of the M.Sc. program in Rehabilitation Science. The recipient must have graduated from an undergraduate program in physical science and be eligible to practise in Canada. Academic achievement and the relevance of the candidate's program to physical therapy are considered. Apply to the Department of Rehabilitation Science by September 1.
OSOTF

William Knapp Buckley Award
The Ontario College of Pharmacists has endowed funds, the annual income of which is awarded to a graduate student in the Department of Pharmaceutical Sciences. Financial need and academic merit are considered.
OSOTF

A. F. Buell Prize
The prize is given to a full-time graduate student in the Faculty of Forestry on the basis of academic merit. Value: annual income.

John Bunting Graduate Prize in Chemistry
Awarded on the basis of financial need and academic achievement to a third or fourth year student in the field of physical organic or bio-organic chemistry. The student must have a research publication from his or her graduate studies. Value: annual income
OSOTF

E. F. Burton Fellowship in Physics
Awarded on the basis of financial need and academic merit to a graduate student in the Department of Physics. The Department may renew the award for one additional year.
OSOTF

L. Butler Graduate Prize in Zoology
Through the generous donation of Dr. Leonard Butler, an award based on academic merit is available to a master's or doctoral student in the Department of Zoology.
OSOTF

CRND Graduate Student Aid Endowment
An anonymous donor has endowed funds for an annual award to be given to graduate students in CRND (Centre for Research in Neurodegenerative Disease.
OSOTF

Margaret C. Cahoon Memorial Fellowship
Awarded, on the basis of financial need and academic merit, to a graduate student in the master's (full-time or part-time) or Ph.D. program in the Graduate Department of Nursing Science. Nominations are made by the Faculty of Nursing Awards Committee. Deadline: March 31. Value: annual income.
OSOTF

Kristi Piia Callum Memorial Fellowship in Ovarian Cancer Research
Awarded by the Faculty of Medicine on the basis of financial need and academic excellence. First preference is to graduate students conducting research in familial ovarian cancer. Second preference is to graduate students doing research in ovarian cancer. Value: annual income.
OSOTF

Canada Life Assurance Company Graduate Fellowship in Medical Research
Awarded on the basis of financial need to students supervised by University of Toronto faculty members at the Samuel Lunenfeld Research Institute at Mount Sinai Hospital. Value: variable.
OSOTF

Canadian Almanac and Directory Publishing Book Award
One or more awards are offered, on the basis of academic merit, to a graduate student(s) following a program in the Institute for Environmental Studies. Value: $500.

The Canadian Association of Chain Drug Stores Social/Administrative Pharmacy Thesis Award
Awarded to a student pursuing thesis research in one of the following areas of inquiry: human resources planning, pharmacoeconomics, health outcomes related to primary care, or pharmacy practice. Apply to the Faculty of Pharmacy. Value: $10,000.

Cardiovascular Sciences Collaborative Program Graduate Student Fund
Through a donation of Pfizer Canada Inc., an annual award is available to a graduate student in the Cardiovascular Sciences Collaborative Program in need of financial assistance.
OSOTF

Thelma Cardwell Prize in Research
Awarded on the recommendation of the Department of Occupational Therapy to the graduating student with the highest standing in the research experience course. Value: $200 annually.

Helen Carpenter Doctoral Fellowship
An admission award offered to a full-time incoming doctoral student in the Graduate Department of Nursing Science on the basis of academic merit.
OSOTF

Mary Chalmers Memorial Bursary
Established by the family and friends of the late Mrs. Mary Chalmers, this bursary is awarded to a graduating M.Sc. student in the Department of Physical Therapy on the basis of financial need. The recipient will demonstrate effective interpersonal skills and participate fully in educational and extra-curricular activities.

C.A. Chant Fellowship
Open to graduate students in the Department of Astronomy and Astrophysics. Value: $3,500 per term.

Chapnik, Freeman and Friedberg Clinical Scientist Program
Awarded to a third or fourth year resident wishing to pursue advanced research training leading to an M.Sc., M.Ed., or Ph.D. degree at the University of Toronto. The applicant must be a

postgraduate M.D. trainee in the Department of Otolaryngology at the University of Toronto. Application required. Value: annual income.

W. Jack Christie Graduate Award in Ecology
Family, friends, and colleagues of Jack Christie have endowed funds for award, on the basis of academic merit, to a master's or doctoral student studying in Zoology. Value: annual income.
OSOTF

C.S. 'Rufus' Churcher Graduate Award in Zoology
Dr. C.S. Churcher has provided funds for award annually to a graduate student studying comparative anatomy, functional morphology, adaptive and taxonomic evolution, paleontology, and stratigraphic distribution or evolution of vertebrates in Zoology.
OSOTF

Ciba Specialty Chemical, Inc. Graduate Student Award
Ciba Specialty Chemicals, Inc. has endowed funds, the annual income of which is awarded to a graduate student in the Department of Chemistry. Preference is given to a student studying polymers and materials. The award is given on the basis of financial need and academic merit.
OSOTF

Dr. Bernhard Cinader Graduate Scholarship in Immunology
Awarded annually to a student in the Department of Immunology on the basis of academic merit and financial need. Apply to the Faculty of Medicine.

The Hardi Cinader Prize
Friends and colleagues of Dr. H. Cinader have endowed a fund, the income of which provides an annual award to the graduate student completing the doctoral program in Immunology who best reflects the goals and life of Dr. Cinader—a broad scientific culture and an interest in both the sciences and the arts.

City of Toronto Graduate Scholarship for Women in the Mathematics
Awarded to a female student enrolled in a master's or doctoral program in mathematics on the basis of financial need, academic merit, and interest in issues related to women in mathematics.
OSOTF

Dr. E. Aileen Clarke Prize
Through an annual donation by the Ontario Cancer Treatment and Research Foundation, a prize of $1,500 is awarded on the basis of academic merit to a second year student in the Master of Science program in Epidemiology whose thesis topic is in the area of cancer epidemiology.

Class of 5T2 Prize
Awarded on the basis of academic merit in the Department of Forestry to a M. Sc. F. or a Ph.D. student specializing in the area of silviculture. Value: annual income.

The Cleghorn Fellowship in Schizophrenia Research
The Clarke Institute of Psychiatry Foundation has provided funds to award, on the basis of financial need, graduate students in the Faculty of Medicine's Institute of Medical Science. Preference will be given to students pursuing research in schizophrenia. Application required. Value: annual income.

Clinical Epidemiology Award
Mahyar Etminan has established an award for a first year graduate student enrolled in the Department of Health Policy, Management and Evaluation's Clinical Epidemiology program who is in good standing but has financial need. First preference given to a student from Iran; second preference given to a student who is a pharmacist; third preference given to a graduate student, on the department's annual Research Day, on the basis of research unit. Apply to the department. Value: $500.

Clinician–Scientist Graduate Program in the Department of Anaesthesia
An award is offered annually, on the basis of financial need, to an M.Sc. or Ph.D. student in the clinician–scientist stream in the Department of Anaesthesia. Value: annual income.
OSOTF

The Randall Coates Epidemiology Prize
Colleagues and friends of the late Dr. Randall Coates have endowed a fund, the income of which provides an annual award to a graduate student in the Graduate Department of Public Health Sciences (Epidemiology), studying in the area of communicable diseases. Only students who have completed one academic session will be considered. Value: annual income.

Connaught R. J. Wilson Fellowship
Connaught Laboratories Limited has established an award of approximately $10,000 by

annual donation to a first-year student in the Department of Public Health Sciences whose career interests lie in the intersection of public health, epidemiology, and health promotion.

Dr. Joe A. Connolly Memorial Award
Family, friends, and colleagues of the late Dr. Joe A. Connolly have endowed a fund, the income of which provides an award to a registered, senior, doctoral student (third year or beyond) who has demonstrated excellence in cell biology research and is involved in extracurricular activities.

Dr. Joe A. Connolly Memorial OSOTF Award
Awarded on the basis of financial need to a registered Ph.D. student demonstrating excellence in cell biology research.
OSOTF

Leslie Gladstone Cook Memorial Fellowships
One or more awards will be made available from the annual income of an endowment established through the generous support of Alfreda Cook. The awardee(s) will be drawn from the annual pool of applicants to the Department of Chemistry. To be eligible, the incoming graduate student must be travelling from other parts of Canada to Toronto or be attending special conferences in their field or require stipend support based on financial need.
OSOTF

Edith Cosens Endowment Fund
Awarded to graduate students in the Department of Nutritional Sciences on the basis of academic excellence to support and promote the study of and the dissemination of information on community nutrition.

Dean Gordon Cosens Graduate Award
In memory of Professor Gordon Cosens, former Dean of the Faculty of Forestry, Miss Edith Cosens has generously endowed funds to provide an annual award to one or more full-time graduate students registered in the Graduate Department of Forestry. Value: annual income.

Helene and George Coward Award in Gerontology
In memory of his parents, Helene and George Coward, Kenneth Coward has endowed an award of approximately $500 to a graduate student who is engaged in research in the field of gerontology. Apply by July 15 to the Institute for Human Development, Life Course, and Aging.

Coxeter Graduate Scholarship
Gifts from admirers, colleagues, and students of Professor H.S.M. Coxeter have established an endowment for a scholarship to a graduate student enrolled in the Department of Mathematics. No application required.

Helen L. Cross (nee Colquhuon) Memorial Graduate Scholarship
Awarded on the recommendation of the Department of Chemical Engineering and Applied Chemistry to a graduate student in the program. Preference is given to a female student and, if possible, a female student from Northern Ontario. Application required. Value: annual income.
OSOTF

James F. Crothers Family Fellowships in Peripheral Nerve Damage
Awarded to students in the Faculty of Medicine on the basis of academic excellence and financial need. Preference given to students researching the causes and treatment of peripheral nerve damage, repair, and regeneration. Application required.

James F. Crothers Family Fellowships in Peripheral Nerve Damage - OSOTF
Henry Vehovec has endowed funds to provide awards to graduate students in the Faculty of Medicine on the basis of financial need and academic excellence. Preference given to students involved in basic research into the causes and treatment of peripheral nerve damage, repair, and regeneration. Apply to the Associate Dean, Inter-faculty and Graduate Affairs, Faculty of Medicine.
OSOTF

Dr. J. R. Cunningham Graduate Fellowship in Cancer Research
This Scholarship was established by The Princess Margaret Hospital Foundation for award to graduate students in the health sciences faculties who are studying with faculty members located at the Ontario Cancer Institute (or its successor) and are engaged in cancer research. Value: variable.
OSOTF

Rosella Cunningham Memorial fellowship
Awarded to a graduate student in the Department of Nursing Science to prepare candidate for work in public health nursing.

Peter Curtis Memorial Bursary
Family and friends of Peter Curtis, former doctoral student in the Department of Industrial

Engineering, have endowed funds to provide one or more awards, on the basis of financial need, to graduate students in the Department of Mechanical and Industrial Engineering.

Dairy Farmers of Canada Graduate Student Fellows hips
For award to Faculty of Medicine graduate students, on the basis of financial need, who are studying in the field of nutrition and osteoporosis. Value: annual income.
OSOTF

The Dalton Chemical Laboratories Organic Chemistry Scholarship
Fellowship for a first year graduate student in organic chemistry whose academic performance improved the most between the third and fourth years in the undergraduate program. Value: annual income.
OSOTF

Grant D. Darker Memorial Award
The annual income from donations received from friends and colleagues in memory of Dr. Grant D. Darker is awarded to the outstanding graduate student in the Department of Botany studying in the area of mycology.

Lillian Elfleda Darker Award
The estate of the late Grant Dooks Darker provides an award for a student (or students) enrolled in the Department of Botany in a master's or Ph.D. program researching some aspect of mycology. The award(s) will be given, on the basis of financial need, to students requiring travel assistance related to their studies.
OSOTF

Wallace A. Delahey Fellowship
Income from a bequest of the late Wallace A. Delahey provides for a fellowship for award to a full-time graduate student in the Faculty of Forestry on the basis of academic merit.

The Dent-Paech Nursing Fellowship
Awarded on the basis of academic merit to a graduate student in the Department of Nursing Science who specializes in mental health nursing.

Michael J. Dignam Graduate Travel Award
Family, friends, and colleagues of the late Professor Michael J. Dignam have established a travel award for graduate students in the Department of Chemistry. Apply to the Department of Chemistry by November 1. Value: approximately $1,000.
OSOTF

Dr. Rajalakshmi S. Dittakavi and Dr. Prema M. Rao Graduate Awards in Laboratory Medicine and Pathobiology
Two awards are given annually to graduate students in the Department of Laboratory Medicine and Pathobiology. These awards are donated by past and present students of Drs. Rajalakshmi and Rao. One award is given to a graduate student pursuing study and research on the cause, prevention, pathogenesis, and cure of cancer. The second award enables a student to present his or her results on the cause, prevention, pathogenesis, and cure of cancer at the Annual Meeting of the American Association for Cancer Research. Apply by February 1 to the Department of Laboratory Medicine and Pathobiology.

The Maureen Dixon Memorial Award
Friends and colleagues of Maureen Dixon have endowed funds, the annual income of which is awarded to a student in the Department of Health Policy, Management and Evaluation. Awarded on the basis of a proven outstanding contribution to a community health agency such as a district health council or a community service delivery agency (home care, nursing agency, mental health agency, etc.)
OSOTF

The R. M. Dixon Prize
On the recommendation of the Coordinator, Graduate Department of Forestry, given to a full-time graduate student in Forestry pursuing studies in an area related to international forestry. Value: annual income.

Gail Donner Doctoral Nursing Fellowship
Awarded on the basis of academic merit to a full-time or part-time doctoral student in the Department of Nursing Science whose nursing career goals and program reflect a nursing administration/health policy focus.
OSOTF

William J. Dowkes Graduate Bursary
Awarded on the basis of financial need to a student in the Department of Chemical Engineering and Applied Chemistry
OSOTF

George F.D. Duff Graduate Fellowship in Mathematics
Awarded on the basis of academic merit to a graduate student in the Department of Mathematics. Financial need may also be considered. Value: annual income.

T. W. Dwight Prize
Awarded on the basis of academic merit to a student in the Master of Forest Conservation degree program in the Faculty of Forestry. Value: annual income.

Earthroots Ontario Forest Conservation Award
Awarded to a student in the Master of Forest Conservation degree program on the basis of the best proposal for a research paper on Ontario forest or wildlife conservation issues in connection with course FOR 3008H ***Research Paper in Forest Conservation.*** The proposal must be relevant to current Ontario forest and wildlife issues and should include implications for conservation and an outline of areas for future research on this issue.

Eco–Tec Founder's Fellowship
Eco–Tec Limited has donated funds to provide one award for a graduate student pursuing environmental graduate studies in the Department of Chemical Engineering and Applied Chemistry. Value: annual income.
OSOTF

Harold S. Edmonds Scholarship
Awarded to a full-time graduate student in the Faculty of Forestry on the basis of academic achievement.

Education Safety Association of Ontario Graduate Scholarship in Health and Safety
Awarded to MSc. or Ph.D. students enrolled in the Research Degree Program of the Department of Public Health Sciences, Faculty of Medicine. First preference will be given to students conducting research in health and safety under the supervision of a faculty member affiliated with the Institute for Work and Health. Secondary preference will be given to students conducting research in health and safety. Value: annual income.

H. V. Ellsworth Graduate Fellowship in Mineralogy
The estate of the late Mabel J. Ellsworth provides for an annual fellowship to a deserving graduate student in the Department of Geology pursuing research in the general field of mineralogy.

Florence Emory Fellowship
This fellowship, provided by the School of Nursing Alumni Association, is open to students who enrol full-time in a master's program in the Graduate Department of Nursing Science who intend to work in the nursing field following graduation, and who are in financial need. The fellowship has a minimum value of $3,500 for the academic session. Apply in writing by March 31 to the Faculty of Nursing Awards Committee.
OSOTF

Epidemiology and Biostatistics Award Endowment
The award will be given annually on a rotational basis to one or more students studying in one of the following programs in the Graduate Department of Public Health Sciences, starting with:
1. Epidemiology (M.Sc./Ph.D.)
2. Public Health Sciences and Epidemiology (M.H.Sc.)
3. Biostatistics (M.Sc./Ph.D.)

The selection will be based on financial need and academic merit.
OSOTF

Etkin Medal for Excellence
Awarded to a graduate student in Aerospace Studies for outstanding performance in the field of flight mechanics, on the recommendation of the Director, Institute for Aerospace Studies. Students in all years of graduate study are eligible. The medal is presented on the occasion of the annual G.N. Patterson lecture or on some other suitable occasion.

A. Murray Fallis Graduate Award in Zoology
For award on the basis of academic merit to a master's or doctoral student studying in Zoology
OSOTF

Bernhard Fernow Graduate Fellowships
Awarded to graduate students in the Faculty of Forestry on the basis of academic merit and financial need. Value: annual income.
OSOTF

Michael S. Fieldus Memorial Award
Family, friends, and colleagues of the late Michael S. Fieldus have endowed a fund, the income of which provides an annual award to one or more graduate students in the Department of Astronomy and Astrophysics. The award is made on the basis of outstanding and

sustained contribution to academic achievement, teaching, or service to the Department of Astronomy and Astrophysics.

P. C. Finlay Q. C. President's Fellowships in **Geology**
Awarded to two or more graduate students studying geology who intend, upon graduation, to take their expertise to developing nations. Value: annual income.
OSOTF

Kenneth C. Fisher Fellowship
Awarded to a highly qualified graduate student in the Department of Zoology engaging in comparative physiology research. Value: annual income.

Frank Fletcher Memorial Fund
The estate of Lorna Yates Fletcher has established a scholarship for award to a graduate student, on the basis of financial need, who is pursuing study and research into the cause and cure of cancer. Value: annual income
OSOTF

Teresina Florio Graduate Scholarship in Cancer Research
Awarded to graduate students enrolled in the Faculty of Medicine working on translational aspects of cancer biology with an interest in developing alternative strategies of cancer treatment beyond conventional chemotherapy or radiotherapy. Submit applications with a research proposal consistent with the conditions of this scholarship. Value: annual income.

Forestry Memorial Admission Fellowship
Awarded on the basis of academic merit to the student entering the professional Master of Forest Conservation degree program with the highest cumulative GPA in an undergraduate program. Value: annual income.

Fortran Traffic Systems Graduate Scholarship in Transportation Research
Awarded to a doctoral-stream student in the Department of Civil Engineering. Preference will be given to a student in Transportation Engineering.

Reino S. Freeman Fellowship
Mrs. Ellen B. Freeman has endowed funds to provide an annual fellowship to a highly qualified incoming graduate student in the Department of Zoology engaging in parasitology research.
OSOTF

Sheila Freeman Graduate Award in Zoology
Colleagues and friends of Sheila Freeman have endowed a fund, the income of which provides an award to a graduate student in Zoology. Value: annual income.
OSOTF

Dr. Thomas L. Friedlich Memorial Award in Surgical Science
The friends and family of Dr. Thomas L. Friedlich have endowed funds, the income of which is awarded, on the basis of financial need, to a neurosurgery resident in the Department of Surgery pursuing a graduate degree in neuro-oncology. In the event that two or more qualified candidates exist, preference will be given to the one demonstrating clinical excellence and compassionate patient care. Apply through the Institute of Medical Science.
OSOTF

Frist-Jus Annual Memorial Award
This scholarship is in honour of the memory of Dr. Juliusz, Dorota and Zofia (Zosia) Frist. Awarded, on the basis of financial need and academic performance, to graduate students specializing in the area of psychopharmacology, including neuro-transmitter and neuro-receptor research. Value: annual income.
OSOTF

Dr. Clara Winifred Fritz Memorial Fellowship in Plant Pathology
The estate of Madeleine Alberta Fritz makes possible an annual award, based on academic excellence, to a graduate student studying in the area of plant pathology. Value: annual income.

Margaret and Howard Gamble Research Grant
Awarded on the basis of financial need to students involved in basic science research related to mental retardation.
OSOTF

Duncan L. Gellatly Memorial Award
Family and friends of Duncan Gellatly have established an award to be given every other year to a graduate student demonstrating excellence in virology research. Submit nominations to the Graduate Studies Committee, Department of Botany. Value: annual income.

General Motors Women in Science Mathematics Awards
Recipients may be graduate or undergraduate female students enrolled in a science or mathematics program of study in the academic year

in which they receive the award. Financial need and academic merit may also be considered. Apply to the Faculty of Arts and Science Student Awards Committee by March 15 for the upcoming Fall/Winter session. Value: annual income.
OSOTF

Gina Gesser Memorial Award
Relatives, friends, and co-students of Gina Gesser have endowed a fund in her memory, the income of which provides an annual award to a graduate student enrolled in the M.Sc. program in Behavioural Sciences. Preference will be given to outstanding students in the area of gerontology, public policy, equity in health care, and the health concerns of immigrant populations. Financial need will be considered.
OSOTF

The Bernard Ghert Fellowship in Psychiatry
Awarded on the basis of financial need to students in the Psychiatry programs at the Mount Sinai Samuel Lunenfeld Research Institute or the Baycrest Centre for Geriatric Care. Value: variable.
OSOTF

Lawrence, Ila and William Gifford Scholarship in Radiation Oncology and Surgery
Awarded on the basis of financial need to graduate students supervised by graduate faculty also appointed to the Departments of Radiation Oncology or Surgery in the Faculty of Medicine. First preference will be given to students engaged in the study of cancer in the gastro-intestinal tract with special reference to the bowel. Second preference will be given to students pursuing studies in cancer or in gastro-intestine-related illnesses. Academic merit will also be considered. Application required.
OSOTF

Lachlan Gilchrist Fellowships
These awards are made annually to students in fundamental physics in their second year of graduate work in the Departments of Aerospace Science and Engineering, Mathematics, or Physics. Value: income.

John A. and Rosamond M. Gillies Fellowship
The annual income from funds generously donated by Mrs. Rosamond M. Gillies is available to full-time graduate students in the Department of Forestry on the basis of academic merit and financial need.

Alice Girard Memorial Fellowship
Awarded on the basis of academic merit to a doctoral student who has completed at least one year of the Ph.D. program in the Graduate Department of Nursing Science. Application not required. Nomination is made by the Faculty of Nursing Awards Committee. Value: annual income.

M.R. Glavicic Prize
Awarded at the end of the first winter session of the professional Master of Forest Conservation degree program in the Faculty of Forestry, on the basis of academic merit and professionalism, to the student who achieves the highest combined grade in two courses, Biodiversity of Forest Organism and Applied Forest Ecology. Value: annual income.

Glaxo Wellcome–Sunnybrook Drug Safety Clinic Graduate Student Fellowships
Awarded to graduate students in financial need pursuing studies in the area of drug safety at the Sunnybrook Drug Safety Clinic. Value: annual income.
OSOTF

Stephen Godfrey Graduate Student Scholarship in Suicide Studies
This award has been set up for a graduate student in financial need in the Department of Psychiatry. Value: annual income.
OSOTF

The Dr.Theodore Goldberg Scholarship Fund
Established by the family, friends, and colleagues of the late Ted Goldberg, former Chair of the Department of Health Policy, Management and Evaluation, the award is available to a Ph.D. student currently enrolled in that department and studying health policy or organizational behaviour. The award is based on excellence, promise, and financial need. The Chair of Health Policy, Management and Evaluation will establish a selection committee each year. Annual value: approximately $1,500.

The Sarah Cusick Gollop and William George Gollop Memorial Graduate Scholarships
Three scholarships are available to graduates enrolled in a program of study in Chemistry leading to an advanced degree, with first preference given to eligible graduates of North Bend High School, Nebraska.

Jenne Lewis Goodman Award
Awarded to students enrolled in the Faculty of Medicine on the basis of their academic excellence in Occupational Therapy. Preference will be given to students in their last year of study who have demonstrated special ability and interest in the area of occupational therapy in mental health as evidenced by excellence in both course work and field work.

Andrew Robertson Gordon Fellowship
The estate of Andrew Robertson Gordon provides for an annual award, based on academic merit, to one or more full-time graduate students in the Department of Chemistry.

C.C. Gotlieb (Kelly) Graduate Fellowship in the Department of Computer Science
Awarded on the basis of academic merit to a student in any sub-discipline of Computer Science.

The Jeanne F. Goulding Fellowship
The estate of the late Mrs. Jeanne F. Goulding provides an annual fellowship for a full-time graduate student in the life sciences (Division IV) pursuing research in the fields of conservation, pollution control, and ecology in general. Value: approximately $5,000.

Graduate Admission Award
For award on the basis of financial need to a student admitted to the master's program in the Faculty of Nursing. Academic merit will also be considered. Value: annual income.
OSOTF

Graduate Award in Laboratory Medicine and Pathobiology
Established by friends and colleagues of Drs. A.D. Baines and M.D. Silver to honour their past contributions as Chairs to the Department of Laboratory Medicine and Pathobiology, an award is given to a graduate student in the Department of Laboratory Medicine and Pathobiology based on academic performance and financial need. Value: annual income.
OSOTF

Graduate Fellowship for Research in Health and Physical Activity
Awarded on the basis of acceptance into the Physical Education and Health program and on academic merit determined by grades, publications, presentations, and research. Renewable for one year upon review. Candidates may apply or nominations may be submitted by a faculty, student, or staff member of the Faculty of Physical Education and Health. Value: annual income.

Graduate Fellowship(s) in Forestry
Awarded on the basis of financial need and academic merit to students pursuing master's and or Ph.D. degrees in the Faculty of Forestry. Value: variable.

Graduate Nurse Student Union Fellowship
Awarded to a master's student in the Graduate Department of Nursing Science who has demonstrated outstanding extra-curricular involvement and/or leadership abilities. Candidate must have a minimum B average.

Graduate Student Award in Relocation Assistance
Awarded to new graduate students in the Department of Chemistry to offset expenses incurred in relocating to Toronto from elsewhere in Ontario. Academic merit and financial need are considered.
OSOTF

Graduate Student Fellowship in Medical Oncology
The award is given to a graduate student in Medical Oncology based on financial need. Value: variable.
OSOTF

Graduate Studies in Silviculture Award
Mr. W. D. Start has endowed funds to provide an award, on the basis of financial need and academic merit, to a full-time graduate student in the area of silviculture or tree improvement in the Faculty of Forestry.
OSOTF

Greater Toronto Airport Authority Graduate Scholarship
Awarded to a student entering the Civil Engineering master's program with additional preference for a student specializing in Transportation Engineering.

Malka and Al Green Graduate Fellowship in Psychiatry
Awarded to graduate students in the department of Psychiatry at Mount Sinai Hospital who are in need of financial assistance. Value: variable.
OSOTF

A. T. Griffis Memorial Graduate Scholarship
Watts, Griffis and McQuat Ltd. have endowed funds to provide a scholarship to a full-time graduate student in the Department of Geology,

on the basis of academic excellence, professional dedication, and imagination. Preference may be given to students requiring geology field trips, especially for research involving a significant economic geology component.

Allan Gross Graduate Award
Awarded on the basis of financial need to a student in the Institute of Medical Science who is researching orthopedic surgery.
OSOTF

The George A. Guess Memorial Fellowship
The estate of Edna Florette Guess provides funds for one or more annual awards to graduate students in the Department of Materials Science and Engineering.

Frank Howard Guest Graduate Bursary
Funds from the estate of Frank Howard Guest provide for bursaries based on academic standing and financial need. Students enrolled in any graduate program in any department in the Faculty of Applied Science and Engineering may be considered. Apply by November 1 to the graduate coordinator.

Danielle Haasz Graduate Scholarship
Dr. Anthony A. Haasz established this scholarship in memory of his wife Danielle for award to a student with an excellent academic record entering the University of Toronto, with emphasis on dietetics, and leading to a professional registration in the association of the Dietitians of Canada. Value: annual income.
OSOTF

Robert and Jean Hadgraft Graduate Fellowship in Chemistry
Awarded on the basis of academic merit to one or more graduate students in the Department of Chemistry. Financial need will also be considered.
OSOTF

Colin Hahnemann Bayley Fellowship in Chemical Engineering
Awarded on the basis of academic excellence to an incoming graduate student. A student entering a master's program will hold the Fellowship for a period of two years. A student entering a Ph.D. program will hold the Fellowship during the final two years of the Ph.D. program. The student will be known as the Colin Hahnemann Bayley Fellow. Value: annual income.

Colin Hahnemann Bayley Fellowship in Chemistry
Awarded on the basis of academic excellence to an incoming graduate student.

Halbert Family Fund for Breast Cancer Research
Awarded to students on the basis of financial need who are resident at the Marvelle Koffler Breast Centre and who are supervised by members of Mount Sinai Hospital or its Samuel Lunenfeld Research Institute Committee. Value: annual income.
OSOTF

Eric Hani Fellowship
Rita and Kurt Hani and Cora Donely have endowed funds for incoming graduate students in the Faculty of Medicine on the basis of financial need. Preference given to students undertaking research in microbiology. All incoming graduate students will be assessed by the Eric Hani Fellowship Selection Committee.
OSOTF

Dr. Walter J. Hannah Clinician-Scientist Award in Obstetrics and Gynaecology
Awarded to master's or Ph.D. trainees in obstetrics and gynaecology who wish to pursue a research career as a clinician-scientist in obstetrics and gynaecology. Value: annual income.
OSOTF

Hayden Hantho Award
Awarded on the basis of financial need to graduate students registered in degree programs studying with U of T faculty members located at the Hospital for Sick Children who are engaged in Pediatric Neurosurgery research. Apply to the Department of Pediatrics, Faculty of Medicine. Value: annual income.
OSOTF

Harmonize for Speech Fund
This annual scholarship is given to a graduate student in the Department of Speech-Language Pathology based on financial need.
OSOTF

Hastings Memorial Fellowship
Friends of the late Dr. Hastings have endowed funds for an award to a full-time graduate student engaged in original investigations in the field of community health under the direction of the Public Health Sciences faculty. Value: not less than $2,500.

Haultain Fellowship
The estate of Mary Alice Wells provides an annual fellowship for award. on the basis of academic merit, to a full-time graduate student enrolled in the Department of Materials Science and Engineering undertaking research in mineral or metallurgical engineering. Preference will be given to students in the research field of mineral engineering.

Baden Havard Endowment Fund
Awarded to graduate students in the Faculty of Medicine conducting research related to the cause and cure of multiple sclerosis. Second preference to graduate students in the Faculty of Medicine doing research on other diseases of the human body or mind. Value: annual income.

Heart and Stroke Foundation Fellowships in Cardiovascular Nursing
Three fellowships are awarded to full-time students in a master's program in the Graduate Department of Nursing Science on the basis of the candidate's record and serious intention, following graduation, of practising in cardiovascular or cerebrovascular nursing in Ontario. Valued at $3,000 each for the academic session. Apply by March 31 to the Graduate Department of Nursing Science.

Heavy Construction Association of **Toronto Graduate Scholarship in Intelligent Transportation Systems**
Awarded on the basis of academic merit to a doctoral-stream student in the Department of Civil Engineering. Apply to the Department of Civil Engineering. Value: annual income.

Heavy Construction Association of Toronto Graduate Scholarship in IT in Construction and Infrastructure
Awarded on the basis of academic merit to a doctoral-stream student in the Department of Civil Engineering. Apply to the Department of Civil Engineering. Value: annual income.

V. L. Henderson Research Fellowship in Electrical and Computer Engineering
Mrs. Ellen Henderson and Professor Marion Bassett have endowed funds, the income of which is awarded, on the basis of financial need, to a graduate in Electrical engineering. Academic merit is also considered.
OSOTF

Charles Hershfield Memorial Scholarship
The Hershfield family has provided a scholarship in memory of the late Professor Charles Hershfield, a faculty member in the Department of Civil Engineering from 1945 to 1976. Based on academic excellence, the income from the fund is awarded to one or two graduate students enrolled in the field of structural engineering upon completion of their first year.

David Hewitt Award
Through the generous donations of alumni, friends, and colleagues of David Hewitt, an award is given to a graduate student in Public Health Sciences on the basis of the student's contribution to the intellectual and social life of the Public Health Sciences student body.

Hannah Farkas Himsley and Alexander Himsley Memorial Prize
Through a generous donation from Ms. Leorah Kroyanker and Ms. Ruth Geva this scholarship has been established for award alternately to graduate students in the Faculty of Medicine's Department of Medical Genetics and the Faculty of Applied Science and Engineering's Biomedical Engineering Group. Value: annual income.
OSOTF

Dr. Warren Ho Memorial Scholarship in Neurosurgery
Awarded on the basis of academic merit to a graduate student studying and/or doing research in the field of neurosurgery in the Faculty of Medicine. Financial need and demonstrated community volunteer work will also be considered. Apply to the Department of Neurosurgery. Value: annual income.

Douglas Paton Hogg Memorial Award
This award was established in 1987 by the Ontario Section, American Society of Mechanical Engineers in memory of Douglas Hogg, eldest son of Allan D. Hogg, M.A.Sc. (1938), Ph.D. (1940), University of Toronto; and Ruth S. Hogg, B.A. (1963), M.A. (1966), University of Toronto. Additional funding has been generously provided by Dr. Allan Hogg. The award is for a graduate student undertaking research related to aircraft/rotorcraft in any of the following areas: stability and control, flight mechanics, crashworthiness and fire hazards, flight safety, or human-machine interactions. In addition to academic standing, the recipient must also be of good character and have good leadership ability. Value: $500.
OSOTF

Frank S. Hogg Memorial Fellowship
This award is offered annually to a graduate student in Astronomy and Astrophysics. One or

more awards are available up to the value of the annual income.

The Thomas H. Hogg Overseas Fellowship
The Faculty of Applied Science and Engineering annually awards one fellowship valued at $10,000. The applicant must be a Canadian citizen or permanent resident, and hold a B.A.Sc. or M.A.Sc. degree from the University of Toronto. The applicant must enrol in a graduate degree program in a recognized university outside the North American continent. Preference is given to applicants in the field of hydraulics, fluid mechanics, or power systems engineering. Apply through the Faculty of Applied Science and Engineering.

Robert C. Hosie Prize
Mr. A.F. Buell, Mr. T. A. Buell, and others have endowed funds to provide an annual prize for award, on the basis of academic merit, to a full-time graduate student in the Faculty of Forestry.

Household Science and Nutritional Sciences Alumni Graduate Scholarship
For award to Faculty of Medicine graduate students on the basis of financial need who are studying in the field of nutritional sciences. Value: annual income.
OSOTF

Gordon Ferrie Hull Fellowship
This fellowship is awarded in alternate years to a Ph.D. candidate in the Department of Physics who already holds an M.Sc. degree or equivalent. Value: annual income.

Kathleen and Donald Strong Hull Fellowship
The estate of Donald Strong Hull has generously provided funding for a fellowship to assist in attracting an excellent candidate to the Department of Botany. The award is given to a graduate student on the basis of financial need and academic merit.
OSOTF

The Tom Hull Scholarship in Computer Science
Friends, colleagues, and former students have established an award in memory of Professor Tom Hull. Awarded to undergraduate or graduate students in computer science, the award is based on financial need and takes academic merit into consideration.
OSOTF

Hunt Estate M.D./Ph.D. Student Aid
Awarded to graduate students in the Faculty of Medicine on the basis of financial need. Value: variable.
OSOTF

Archibald G. Huntsman Graduate Award in Zoology
Awarded on the basis of academic merit to a master's or doctoral student in Zoology. Apply to the Associate Chair, Graduate Affairs, Department of Zoology. Value: annual income.

Mary Gertrude I'Anson Scholarship
Awarded to a doctoral student in the health sciences, broadly defined, on the basis of financial need and academic merit. Eligible graduate units: Life Sciences (Division IV) and Biomedical Engineering, Chemical Engineering, Environmental Studies, Human Development and Applied Psychology, Management, Mechanical Engineering, Social Work, and Sociology. Application consists of nomination form plus a letter of recommendation from the graduate unit, transcripts, OSOTF financial needs assessment form, and a statement from the nominee describing research project (1–2 pages). Deadline: end of April. Value: approximately $10,000. In some cases, awards of lesser value may be granted as top-up awards.
OSOTF

Frederick P. Ide Graduate Awards in Zoology
Established through a bequest from the estate of Dr. Frederick Palmer Ide and various other donors, fourteen awards of equal value are awarded to master's or doctoral students studying in Zoology.
OSOTF

Elizabeth Inglis Bursary
Awarded to a student in the Department of Physical Therapy on the basis of financial need. Eligibility for this bursary shall not be affected by academic standing, course load, or year of study. Value: annual income, to a maximum of $500 per recipient.
OSOTF

Fred G. Jackson Prize
Awarded annually to the student enrolled in the professional Master of Forestry Conservation degree program in the Faculty of Forestry who submits the best report in the Research Paper in Forestry Conservation course, based on work undertaken in the Internship in Forest Conservation course. Value: annual income.

R. E. Jervis Award
The Canadian Nuclear Society and others have provided funds to offer a $500 annual award to a Canadian graduate student pursuing full-time research involving the development of radiochemistry or its application in areas such as human health, chemical engineering, nuclear safety, or environmental pollution. Apply to the Department of Chemical Engineering and Applied Chemistry.

Edward Elsworth Johnson Postgraduate Forestry Fellowships and Awards
The estate of Marguerite Johnson has established a fund, the annual income of which is awarded to students pursuing master's and/or Ph.D. degrees in the Faculty of Forestry. Academic merit and financial need are also considered.

Shirley Jones Fellowship
The estate of Florence Shirley Jones has created an award for a graduate student in Astronomy and Astrophysics. Value: annual income.

Wendy M. Kates Memorial Bursary
In memory of Wendy M. Kates, family members, friends, and colleagues have endowed funds to provide a bursary for award to a graduate student in Biomedical Communications on the basis of financial need and academic achievement in the M.Sc.BMC Master's Research Paper. commitment to the profession may also be considered.
OSOTF

Wendy M. Kates Memorial Scholarship
In memory of Wendy M. Kates, family members, friends, and colleagues have endowed funds to provide an annual scholarship for award to a graduate student in Biomedical Communications on the basis of academic achievement in the M.Sc.BMC Master's Research Paper. commitment to the profession may also be considered.

Dr.Terry Kavanagh Fellowship
Awarded to new students entering a graduate program of study in primary or secondary prevention of heart disease, cardiac rehabilitation, or in a related field in which physical fitness is the primary component for the improvement of health and quality of life. Awarded on the basis of academic merit determined by grades, publications, presentations, and research. Apply to the Faculty of Physical Education and Health. Value: annual income.

Dr. Norman Keevil President's Fellowship in Geology
The award is offered to two or more graduate students studying geology at the master's or doctoral level. Candidates must be students who intend to bring their expertise to developing nations upon graduation.
OSOTF

John L. Kellerman Fellowship in Civil Engineering
This fellowship is given to a student holding a degree in engineering who has an interest in and an aptitude for steel construction. For application and further information regarding the value of the fellowship consult the Department of Civil Engineering.

Merrijoy Kelner Scholarship
Various donors have endowed a fund to honour Professor Kelner upon her retirement from the University of Toronto. The annual income is awarded to an outstanding M.Sc./Ph.D./M.H.Sc. (Health Promotion) student in the Graduate Department of Public Health Sciences (Behavioural Sciences) who shows excellence and great promise for a career in applying social sciences to the health field.

Dr. Jesse Keshin Graduate Student Award
Ms. Barbara Wingrove and Mr. Victor H. Romley have kindly endowed funds to establish a fellowship for award to a Faculty of Medicine graduate student on the basis of financial need. Value: annual income.
OSOTF

Dr. Edward Ketchum Graduate Student Scholarships
For graduate students in financial need who are participating in research programs investigating novel-immunotherapeutics for B-cell lymphoma at the Faculty of Medicine. Value: variable.
OSOTF

The John Davidson Ketchum Memorial Graduate Award in Psychology
Awarded to a student studying the broad field of human psychology. Financial need and academic merit are considered.
OSOTF

Kathleen King Doctoral Fellowship
An admission award is offered, on the basis of academic merit, to a full-time incoming doctoral student in the Graduate Department of Nursing Science. Application not required. Nomination is made by the Faculty of Nursing Awards Committee. Value: $5,000 or annual income.

Ina Kniep Scholarship
Awarded to graduate students in the Department of Nutritional Sciences on the basis of academic excellence. Preference will be given to students who are members of the Canadian Dietetic Association and who are pursing graduate studies in Community Nutrition.

Partners in Research Marvelle Koffler Prize
Awarded to students from the Department of Immunology and/or the Department of Laboratory Medicine and Pathobiology doing biomedical research. Offered on the basis of academic excellence and on demonstrated public education in the lay community related to the mission of Partners in Research. Secondary preference will be given to graduate students in other graduate units of the Faculty of Medicine.

Dr. Peter Kong–Ming New Memorial Award
Awarded to a M.Sc. or Ph.D student for the best paper submitted for a course in Behavioural Science during the previous calendar year. Theses and dissertations are ineligible for consideration. All M.Sc. and Ph.D. graduate students enrolled in the Department of Behavioural Science's graduate program are eligible to apply directly for this award and/or to be nominated by faculty. Value: book award to the total value of annual income.

Marion Kuhns Memorial Fellowship
Awarded to a graduate student in the Department of Nursing Science on the basis of financial need and academic standing in the last year of the Pediatric Nursing specialization. Application not required. Nomination is made by the Faculty of Nursing Awards Committee. Value: approximately $2,500.

Arthur and Sonia Labatt Fellowships
Awarded, on the basis of financial need and academic excellence, to master's or doctoral candidates in the Institute for Environmental Studies. Preference will be given to students who are exploring practical based solutions to environmental issues or examining the market place for solutions to environmental issues. Value: annual income.
OSOTF

The Annie L. Laird Fellowship in Food Sciences
The Annie L. Laird Fellowship, the gift of her sister, Miss Elizabeth R. Laird, D.Sc., is awarded in altemate years to a University of Toronto graduate undertaking a graduate program in nutrition in the Department of Nutritional Sciences. Value: approximately $3,200.

The Lorne F. Lambier, Q.C. Scholarship
Awarded to a student investigating or researching cancer within the discipline of biochemistry. Nomination form required. Deadline: near the end of April. Value: annual Income.

Robert E. Lansdale/Okino Computer Graphics Graduate Fellowship in dgp for the Department of Computer Science
Awarded on the basis of academic merit to a graduate student in the Department of Computer Science's Dynamic Graphics Project. Financial need may also be considered. Value: annual income.

Dr. Bernard Lau Memorial Scholarship (B): Graduate Bursary
The family and friends of Dr. Bernard Lau have established a fund, the annual income of which is awarded to an incoming graduate student in the Faculty of Medicine. Recipient should participate in extracurricular activities and demonstrate a concern for disadvantaged members of the community.
OSOTF

Dr. Alan K. Laws Clinical–Scientist Fellowship Fund
The Laws Fellowship promotes excellence in training anaesthetists for careers as clinician–scientists. Preference is given to anaesthesia residents or junior fellows enrolled in a graduate program. Apply to the Faculty of Medicine. Value: annual income.

Donald J. Leroy Graduate Prize in Physical Chemistry
Annual income from the generous donations of family, friends, and colleagues of the late Professor D. J. Leroy is available to a graduate student in the Department of Chemistry. Particular attention is paid to the student's contribution to the writing of a research paper(s), either submitted or published.

Carol Anne Letheren Fellowship
Awarded to a new student in the Faculty of Physical Education and Health on the basis of admission, the study of girl's and women's health, physical education and sport administration through research and advocacy, and on academic merit. Renewable for one year upon review.
OSOTF

Hans Leutheusser Memorial Award
Awarded to a graduate student in the Department of Mechanical and Industrial Engineering

who demonstrates financial need and good academic standing.
OSOTF

Dr. Norman Levine Bursary in Graduate Pediatric Dentistry
Dr. and Mrs. Norman Levine and family have contributed funds for a fellowship for award to a student currently in the graduate program in Pediatric Dentistry who demonstrates financial need and has satisfactory academic standing.
OSOTF

Herta Leyss Scholarship in Physical Therapy
Awarded on the basis of academic excellence to graduate students in the Department of Physical Therapy, Faculty of Medicine.

Lifebeat '96 Graduate Studentship Award in Women's Health
This scholarship is awarded annually to a graduate student studying women's health in the Faculty of Medicine's Department of Family and Community Medicine. Value: annual income.
OSOTF

Mart Liinve Graduate Scholarship
Awarded on the basis of academic merit to a graduate student in the Department of Mechanical and Industrial Engineering. Value: annual income.

Olive Lindsay Scholarship
The estate of Samuel David Climans provides an award to a graduate student doing medical research in the Faculty of Medicine. Value: annual income.

The Harold L. Livergant Scholarship
Awarded to a student entering the M.H.Sc. program in Health Policy, Management and Evaluation on the basis of excellence and promise in long term care management.

Robert W. Lyons Admission Fellowship
Awarded on the basis of academic merit to one or more full-time graduate students in the first year of a degree program in the Faculty of Forestry.

The Bernard Ludwig Fellowship in Obstetrics and Gynaecology
For award to graduate students supervised by staff in the Department of Obstetrics and Gynecology on the basis of financial need. Value: annual income.
OSOTF

The Samuel Lunenfeld Research Institute Fellowships
This annual scholarship has been established through a generous endowment from the Mount Sinai Hospital Foundation of Toronto for award to graduate students in the Faculty of Medicine on the basis of financial need.
OSOTF

Patricia Lyon Nursing Fellowship
Awarded to full-time or part-time master's students in the Department of Nursing Science whose studies are consistent with the goals or will further the strategic directions of the Toronto Rehabilitation Institute. Academic merit is considered. Preference is given to employees of the Toronto Rehabilitation Institute. Apply to the Corporate Professional Leader for Nursing, Toronto Rehabilitation Institute, by February 1. Value: annual income.

MDS Nordion Graduate Scholarship in Radiopharmaceutical Sciences
Awarded to students enrolled in the Department of Pharmaceutical Sciences; preference given to students in the radiopharmaceutical sciences.
OSOTF

MRC Group Graduate Student Bursary
The bursary is given to a graduate student working in the MRC Group in Periodontal Physiology.
OSOTF

Frank A. MacDougall Fellowship
A fellowship awarded on the basis of academic merit to a full-time student enrolled in the M.Sc.F. or Ph.D. programs in the Faculty of Forestry. Value: annual income.

MacPherson Prize in Microbiology
Dr. L.W. MacPherson has established an award for the top graduate student in microbiology. Value: $1,000 and a medal supplied by the donor.

Mary and Ron Martin Graduate Fellowship in Astrophysics
Awarded to a student in the field of astrophysics on the basis of academic merit. Financial need may also be considered. Value: annual income.

Yoshio Masui Prize in Developmental, Molecular, or Cellular Biology
Awarded on the basis of academic excellence to a master's or doctoral student in the Department of Zoology. International students are en-

couraged to apply. Apply to the Associate Chair, Graduate Affairs, Department of Zoology. Value: annual income.

The J. Edgar McAllister Foundation Graduate Bursaries
Four bursaries are awarded annually to students registered in one of the graduate departments of Mechanical and Industrial Engineering, Electrical and Computer Engineering, Chemical Engineering and Applied Chemistry, Materials Science and Engineering, and Geology. Value: $5,000.

Donalda Jean McGeachy OSOTF Memorial Award
The estate of Donalda Jean McGeachy has generously provided funds for scholarship(s) for graduate students in the Department of Speech-Language Pathology.
OSOTF

Dr. Barbara A. McLaren Scholarship
Awarded on the basis of academic performance, staff recommendation, and the student's area of study. Preference given to students interested in aspects of human nutrition related to the community or to the understanding and control of problems such as obesity that are prevalent in the community.

McLean Foundation Graduate Scholarships in Science and Technology
Four scholarships awarded on the basis of financial need to graduate students in the Department of Chemical Engineering and Applied Chemistry. Academic excellence will also be considered. Value: $15,000 each.
OSOTF

J. Playfair McMurrich Fellowship in Anatomy
Funds from the estate of Kathleen Isabel McMurrich, in memory of her late father, Dr. J. Playfair McMurrich, provide a fellowship for a doctoral student in the Department of Anatomy and Cell Biology. The number of awards available is based on the annual income.

Kathleen McMurrich Memorial Bursary
Awarded to a student in the second or graduating year of the M.Sc. program in Physical Therapy, based on financial need, good academic standing, and active participation in University activities.

Medical Graduate Student Bursary Fund
A limited number of high-need bursaries are available to professional master's students in the Graduate Departments of Occupational Therapy; Physical Therapy; Health Policy, Management and Evaluation; Public Health Sciences; Speech-Language Pathology; and in the Biomedical Communications and Genetic Counselling programs. Questions regarding eligibility and applications should be directed to the individual departments/programs listed.

Mentor Medical Systems Canada Graduate Scholarship in Plastic Surgery
Awarded to graduate students in the Faculty of Medicine on the excellence of their research proposals. Preference given to graduate students who are resident Postgraduate Surgical Trainees in the Division of Plastic Surgery in the Department of Surgery and are pursuing studies in breast surgery, cosmetic surgery, or tissue engineering.

Carlos Melendez Memorial Award
Awarded to an M.Sc. student in the Department of Physical Therapy who best exemplifes the strengths of humanity and compassion demonstrated by the late Carlos Melendez.
OSOTF

The Merck Frosst Canada Inc. Chemistry Conference Award/The Merck Frosst Canada Inc. Graduate Award in Chemistry
The Conference portion of this award will be given to a senior graduate student in synthetic organic chemistry to attend an international conference and present findings. The student must have a research publication from his or her graduate studies. The Graduate Award portion will be awarded to an incoming graduate student intending to carry out research in organic synthesis.
OSOTF

Merck Frosst Graduate Scholarship in Biosciences and Biotechnology
Awarded on the basis of academic merit to a new student entering the Master of Biotechnology program.

David F. Mettrick Fellowship
Awarded to a qualified graduate student in the Department of Zoology engaged in any aspect of zoological research. Value: annual income.
OSOTF

Al Miller Fellowship
Awarded to an outstanding student pursing a graduate degree in the Department of Materials Science and Engineering. Value: annual income.

Anthony B. Miller Prize in Cancer Epidemiology
For award to a student who has completed a doctoral program in Epidemiology within the previous academic year, with the thesis clearly related to cancer. Value: annual income.
OSOTF

Margaret Amelia Miller Fund
The estate of Willett Green Miller provides an annual award of approximately $1,500 for a full-time student registered in the School of Graduate Studies for at least one year. The student must be studying geology or geophysics under supervision at Erindale College.

Carol Mitchell and Robert Venn Graduate Student Fellowship in Women's Health
Two awards will be given annually as follows: 50% of the annual income will support a graduate student undertaking women's health research with a Faculty of Medicine member located at the Clarke institute of Psychiatry; 50% will support a graduate student undertaking women's health research with a Faculty of Medicine member located at the Women's College Hospital (or its successor). Value: variable.
OSOTF

Kenneth M. Molson Fellowship
Kenneth M. Molson Foundation has generously endowed an entrance fellowship for a student entering the Institute for Aerospace Science and Engineering. Value: annual income.
OSOTF

The Norman F. Moody Award
This award was created on the occasion of the retirement of Professor Norman F. Moody as director of the institute of Biomedical Engineering. Annual value: approximately $75.

Ara Mooradian Scholarship
Awarded to a graduate student in any discipline of the Physical Sciences, Engineering, or Life Sciences related to radioactivity. Selection is based on academic merit. Graduate students can hold the award for a maximum of three and two years, respectively, subject to satisfactory progress as viewed by the selection committee. Application is by way of nomination by the student's graduate unit, transcripts, one letter of recommendation, and a statement from the applicant which includes the following: awards received, contribution to research, and study plan. Deadline: end of April. Approximate value: $6.000.

The W.W. Moorhouse Fellowship
The W.W. Moorhouse Fellowship is awarded annually to a graduate student in the Department of Geology. Value: approximately $1,000.

Grace (Weymark) Morgan Scholarship
Grace Morgan has provided funds to offer scholarships, on the basis of financial need, to one or more full-time graduate students. Preference is given to undergraduate students from Memorial University who qualify for entrance to the Master of Health Science (M.H.Sc.) program in community nutrition. Application required.
OSOTF

F. K. Morrow Forestry Admission Fellowship
The award is given to a student entering the professional Master of Forest Conservation program in the Faculty of Forestry. Value: $2,000.

Mount Sinai Hospital Graduate Scholarships in Science and Technology
Awarded on the basis of financial need and academic excellence to one or more graduate students in the Faculty of Applied Science and Engineering who are:
1. in the Institute of Biomaterials and Biomedical Engineering, the Department of Chemical Engineering and Applied Chemistry, or the Department of Materials Science and Engineering;
2. supervised or co-supervised by a graduate faculty member on staff at Mount Sinai Hospital; and
3. supervised or co-supervised by a graduate faculty member of the Department of Laboratory Medicine and Pathobiology.
Value: $15,000 each.
OSOTF

Dr. Gwen Mulock Award
Applicants must be registered in the second year of the M.S.W. program at the Faculty of Social Work. Preference is given to candidates in Medical Social Work. Apply to the Faculty of Social Work. Value: annual income.

Thomas and Edna Naylor Memorial Award in Health Services Research
Awarded to a graduate student in the Department of Health Policy, Management and Evaluation who completes the best thesis in the field of health services research. Apply to the Department of Health Policy, Management and Evaluation.

Emily Newman Scholarship
The Emily Newman Scholarship is awarded to a graduate student studying pulmonary hypertension with Dr. Marlene Rabinovitch in the Division of Cardiovascular Research at The Hospital for Sick Children. The student will be chosen on the basis of excellence in science, motivation, and commitment to medical research.

Heather Milne Nielsen Graduate Scholarship
Awarded to one or more full-time or part-time M.H.Sc. students in the Community/Public Health Nutrition program. Preference will be given to students whose interests match those of Heather Milne Nielsen and who are committed to interdisciplinary study to broaden understanding of the multifactorial causes of nutritional issues.

The V. J. Nordin Prize
Awarded to a full-time Forestry graduate student pursuing studies in an area related to tropical forestry. Value: annual income.

Nortel Institute Graduate Scholarship for Telecommunications
Bell Northern Research Limited has established an award for a student in the master's program in Telecommunications based on financial need; academic merit may also be considered. Value: annual income.
OSOTF

Northwater Management Award in Gerontology
The award supports travel and related conference expenses allowing a graduate student to present a paper in the field of aging or gerontology at a conference. The award is made on the basis of financial need, the quality of the paper to be presented, and the academic promise of the applicant as judged by the Awards Committee of the Institute for Human Development, Life Course and Aging. Application form, conference paper, and supporting letter from the student's professor and co-author (if applicable) are required. Apply to the Institute for Human Development, Life Course and Aging. Value: annual income.

Novartis Graduate Award
Awarded to graduate students in the Faculty of Medicine whose supervisors are members of the Banting and Best Diabetes Centre. Apply to the Banting and Best Diabetes Centre, Committee for the Novartis Graduate Award. Value: $10,000.

Louie J. Nouolillo Fellowship in Forestry Research
Louie J. Nozzolillo has generously endowed funds to provide a fellowship for award on the basis of academic merit to a graduate student in the Graduate Department of Forestry. The award normally takes the form of a top-up to an Ontario Graduate Scholarship or a U of T Fellowship.

Faculty of Nursing Admission Fellowship for Part-Time Master's Student
Awarded to a candidate in financial need who has a sound academic record and who is applying to enrol part-time in a master's program in the Department of Nursing Science. Apply by letter explaining financial circumstances and submit a completed financial needs assessment form. Value: annual income.
OSOTF

Nursing Alumni Graduate Fellowship
On the recommendation of the Faculty of Nursing, $5,000 is awarded to a student registered full-time in the MSc. or M.N. program in the Faculty of Nursing demonstrating high academic achievement.

Faculty of Nursing Class of 5T5 Award
The Class of 5T5, Faculty of Nursing has established a fund, the annual income of which is awarded to a student completing one year of full-time or part-time studies in the master's program in the Faculty of Nursing. Awarded on the basis of demonstrated financial need. Candidates must show evidence of community involvement and/or leadership. Apply by March 31 to the Awards Committee, Faculty of Nursing. The application must include proof of financial need and two letters of reference, showing evidence of community involvement and/or leadership either within or external to the University of Toronto.
OSOTF

Faculty of Nursing Class of 6T0 Award
Awarded to a full-time graduate student in the Department of Nursing Science on the basis of academic merit. Application not required. Awarded on the nomination of the Faculty of Nursing Awards Committee. Value: annual income.
OSOTF

Faculty of Nursing Doctoral Admission Award
Awarded on the basis of financial need to a student admitted to the Ph.D. program in the

Faculty of Nursing. Academic merit will also be considered. Value: variable
OSOTF

Faculty of Nursing Doctoral Award in the Care of Children
Nortel has generously donated funds, the annual income of which is awarded to a doctoral student in the Department of Nursing Science. Eligibility is based on academic merit and priority is given to those engaged in research on the care of children. Apply to the Awards Committee, Faculty of Nursing by March 31.

Nursing Faculty/Staff Graduate Fellowship
Awarded to students in the Graduate Department of Nursing Science on the basis of financial need and academic merit

Department of Nutritional Sciences Graduate Student Fellowship
Awarded to Faculty of Medicine graduate students on the basis of financial need who are studying nutritional sciences and food safety.
OSOTF

Occupational Hygiene Scholarship Fund (Community Health)
Alumni and faculty members of Public Health Sciences have generously established a fund, the annual income of which is awarded to a student enrolled in the Occupational Hygiene Specialty of the M.H.Sc. program. Eligibility is based on financial need and academic merit.
OSOTF

Occupational Therapy Fund
Awarded to one or more graduate students enrolled in the Occupational Therapy program at the University of Toronto with demonstrated financial need. Value: variable.
OSOTF

Atsumi Ohno Scholarship
Professor Atsumi Ohno of the Chiba Institute of Technology has established an award, given on the basis of academic merit, to a graduate student engaged in research in the field of solidification of metals in the Department of Materials Science and Engineering
OSOTF

Ontario Nursing Home Association Fellowship
An award of $750 is offered annually to a full-time student in a master's degree program in the Graduate Department of Nursing Science. Candidates must seriously intend to practise gerontological nursing in Ontario following graduation. Preference is given to applicants specializing in the care of the institutionalized elderly. Apply by March 31 to the Graduate Department of Nursing Science.

Rein Otson Memorial Graduate Scholarship
Awarded to a graduate student on the basis of academic merit in the Department of Chemical Engineering and Applied Chemistry; preference given to students from Estonia. Application required. Value: annual income.

Rein Otson Memorial Travel Endowment
Awarded to a graduate student in the Department of Chemical Engineering and Applied Chemistry, with preference given to students from Estonia. The purpose of this award is to assist the recipient of the Rein Otson Memorial Graduate Scholarship with travel and related expenses in order to conduct research and attend conferences/workshops. Application required. Value: annual income.

Anne–Liis Ots–Goodman Prize
Friends, colleagues, and family of the late Anne–Liis Ots–Goodman have endowed a fund, the income of which provides an award to a graduating student (not a physician) who achieves the highest grades in the professional masters program in Occupational Hygiene.

PMC–Sierra, Inc. Scholarship in Engineering
An annual donation of $1,500 is awarded to recognize the academic achievement and related thesis work in the networking/semiconductor field of graduate students completing their final year in the department of Electrical and Computer Engineering. Awarded on the basis of academic achievement in the previous academic year.

Dr. Roman Pakula Memorial Award
Through donations from family, friends, and colleagues of the late Dr. Roman Pakula, a $400 award is available annually to a graduate student in the M.Sc. program in the Department of Molecular and Medical Genetics (microbiology program).

Wilfred H. McKinnon Palmer Academic Award
Awarded to students registered in the M.H.Sc. Community Health (Family Medicine) program in the Faculty of Medicine on the basis of academic excellence. Application not required.

Nora I. Parker Ph.D. Admission Award
For award on the basis of financial need to a student admitted to the Ph.D. program in the Faculty of Nursing. Value: annual income
OSOTF

Mary Elizabeth McGainty Parkin Graduate Fellowship in Community Health
Dr. William J. McGainty and others have donated funds to establish a fellowship for award, on the basis of financial need, to students in the Department of Family Medicine in the M.H.Sc. program. Value: variable
OSOTF

Patino Mining Corporation Research Fellowship
Nipissing Mining Company Ltd., now merged with the Patino Mining Corporation, has endowed funds to provide an annual fellowship for award to a graduate of a recognized university proceeding to a master's or doctoral degree in the field of mineral processing in a department of the Faculty of Applied Science and Engineering at the University of Toronto.

The G. N. Patterson Award
This award was created on the occasion of the retirement of Dr. G. N. Patterson as Founding Director of the University of Toronto Institute for Aerospace Studies (UTIAS). Funds were donated by Dr. Patterson, the UTIAS alumni, and industry. The award is given annually to a UTIAS student who has made an outstanding research contribution. Value: $1,200.

Judy and Samuel Pencer Graduate Fellowship in Psychiatry
The Mount Sinai Hospital Foundation of Toronto has established an award for graduate students in the Department of Psychiatry at Mount Sinai Hospital who are in need of financial assistance. Value: variable
OSOTF

Perinatal Nurses of Southern Ontario Graduate Award in Women's Health
Awarded on the basis of financial need to a graduate student enrolled in the master's or Ph.D. program in the Faculty of Nursing. Demonstration of strong interest in women's health issues is also necessary. Value: annual income
OSOTF

Al and Hannah Perly Graduate Student Scholarship
Bob Rae and Arlene Perly Rae have donated funds for this scholarship for award, on the basis of financial need, to graduate students studying leukemia/lymphoma and women's health in the Faculty of Medicine. Value: annual income
OSOTF

The Peterborough K. M. Hunter Graduate Scholarships and the Peterborough K. M. Hunter Postdoctoral Fellowships
The K.M. Hunter Graduate Studentships are awarded to Ph.D. students in the Faculty of Medicine with research interest in Alzheimer's disease, arthritis, cancer, heart and stroke, schizophrenia, glaucoma, cerebral palsy, or lung disease. A CGPA of A- is required. The Postdoctoral Fellowships are awarded to fellows holding a M.D. or Ph.D. with research interest in urban, global, or aboriginal health. Preference given to fellows whose supervisor holds a primary appointment at St. Michael's Hospital.

Dr. L. Bradley Pett Graduate Award in Biochemistry-OSOTF
Dr. L. Bradley Pett has endowed a fund, the annual income of which is awarded to graduate students in the Department of Biochemistry on the basis of financial need. Academic excellence will also be considered. Apply to the Department of Biochemistry. Value: annual income.
OSOTF

Dr. L. Bradley Pett Graduate Award in Biological Chemistry
Awarded to a graduate student in the Department of Chemistry who has completed at least one year of graduate work in the area of biological chemistry. While the award is made on the basis of financial need, academic merit will also be considered. Apply to the Chemistry Graduate Office by March 1. Value: annual income.
OSOTF

Lorne Phenix Graduate Award
Awarded on the basis of academic excellence to a student working under the direct supervision of a faculty member of the Heart and Stroke/Richard Lewar Centre of Excellence in Cardiovascular Research.

Dr. Eliot A. Phillipson—Department of Medicine Fellowships
The Mount Sinai Hospital Foundation of Toronto has endowed funds to establish a fellowship for graduate students in the Department of Medicine at Mount Sinai Hospital on the basis of financial need. Value: annual income.
OSOTF

Physical Therapy Annual Fund—OSOTF
Awarded to one or more graduate students enrolled in the Physical Therapy program at the University of Toronto who demonstrate financial need.
OSOTF

OSOTF Physical Therapy Fund
Friends and graduates of the Department of Physical Therapy have donated funds for award to one or more Physical Therapy graduate students with demonstrated financial need. Apply to the Graduate Department of Physical Therapy.
OSOTF

Lloyd and Frankie Pidgeon Fellowship
Mr. Lloyd Pidgeon has generously endowed a fellowship for a third-year or fourth-year doctoral student in the Department of Materials Science and Engineering. The student should be strongly focused on studies in extractive metallurgy, although not necessarily tied to non-ferrous metals. Value: annual income.
OSOTF

Ross Pierce Memorial Scholarship
The annual income from the Trust Fund is normally awarded, on the basis of academic merit and financial need, to a student enrolled in the first year of the M.H.Sc. program in Speech-Language Pathology.

Poyton Graduate Student Bursary in Oral Radiology
Awarded to students in the graduate program in Radiology who are Canadian citizens and residents of Ontario. An excellent academic record and demonstration of financial need are required.

Platform Computing Graduate Fellowship in Computer Science
Awarded on the basis of academic merit and financial need to a student in the Department of Computer Science.

Mildred Claire Pratt Graduate Nursing Fellowship
The estate of Mildred Claire Pratt has generously provided funds, the income of which is awarded to graduate students having completed one year of full-time or part-time study in palliative care at the Department of Nursing Science. Eligibility is based on financial need, and priority is given to those who exemplify the qualities of compassion and efficiency. Apply to the Awards Committee, Faculty of Nursing by March 31.
OSOTF

H. W. Price Research Fellowship in Electrical and Computer Engineering
The H. W. Price Research Fellowship in Electrical Engineering consisting of the income from the fund accumulated over one or more years, derived from the sum of $10,000 donated by the Hydro-Electric Power Commission of Ontario, is awarded from time to time to a graduate in Electrical Engineering or Computer Engineering from any recognized university, registered in the School of Graduate Studies, wishing to pursue studies in the field of electrical engineering or computer engineering. Value: approximately $2,000.

Princess Margaret Hospital Foundation Graduate Fellowships in Cancer Research
For award to registered graduate students in degree programs who are studying with University of Toronto faculty members located at the Ontario Cancer Institute and who are engaged in cancer research. Value: variable.
OSOTF

John L. Provan Fellowship in Surgical Education
Various donors have provided funds to offer an annual award to a surgical graduate student needing financial assistance to take formal training leading to a graduate degree in education at the University of Toronto. Value: variable.
OSOTF

The Manuel and Anne Belle Pusitz Graduate Fellowship
The Manuel E. Pusitz Estate provides an annual fellowship to a full-time student in financial need who has demonstrated success in the first year of a master's program in the Graduate Department of Nursing Science and is enrolling in a second year of full-time study. Preference may be given to an international student. Apply to the Graduate Department of Nursing Science by March 31.

Shahid U. H. Qureshi Memorial Scholarship
Various donors have endowed funds to provide a scholarship for award to an outstanding graduate student in the area of communications, on the recommendation of faculty in the Communications group in the Department of Electrical and Computer Engineering.

David Rae Graduate Student Scholarship
Awarded on the basis of financial need to graduate students studying in the areas of leukemia and lymphoma at the Faculty of Medicine. Value: annual income.
OSOTF

Ewing Rae Graduate Scholarship
Awarded to a doctoral-stream student studying electrical engineering in the Department of Electrical and Computer Engineering. Academic achievement and financial need are considered, as well as the student's intention to work or conduct further study in Canada.

W. H. Rapson Memorial Award
Various donors have contributed to a fund, the annual income of which is given to a graduate student in the Pulp and Pulp Research Centre, on the basis of academic merit. Awarded on the recommendation of the Department of Chemical Engineering and Applied Chemistry.
OSOTF

Ray Reiter Graduate Award in Computer Science
Awarded on the recommendation of the Department of Computer Science to a graduate student in the area of artificial intelligence. The award is based on financial need. Value: annual income.
OSOTF

L. V. Redman Fellowship
Candidates for this award must be completing their undergraduate training and entering a program of study and research in Chemistry leading to an advanced degree. Two fellowships of $2,500 each are awarded for an academic session and preference is given to graduates from universities other than Toronto.

Charles Reeve Memorial Bursary
Established by the family of the late Charles Reeve, this bursary is awarded to an M.Sc. student in the Department of Physical Therapy. Apply through the Department.

Carl Reinhardt Fellowship in Astronomy
This award is offered to candidates proceeding to a graduate degree in Astronomy and Astrophysics. One or more awards is available up to the value of the annual income.

Right Track CAD Graduate Scholarships
Three scholarships are awarded annually to graduate students registered in the Department of Electrical and Computer Engineering. Preference is given to students concentrating their studies in Programmable Logic. Academic achievement is the main criterion. Application not required. Value: annual income.

Edna Margaret Robertson Scholarship
Endowed funds from the estate of Edna Margaret Robertson provide for two annual awards of approximately $500 each to new students in the Department of Zoology whose research topic is related to conservation of fish or wildlife in Ontario.

Malcolm Slingsby Robertson Fellowship in Mathematics
The Venerable John M. Robertson and others have endowed funds to provide an annual fellowship for award, on the basis of academic merit, to one or more graduate students in the Department of Mathematics.
OSOTF

Malcolm Slingsby Robertson Prize in Mathematics
Through the generosity of the Venerable John M. Robertson, a $500 annual prize is awarded to a graduating Ph.D. student for demonstrated excellence in research.

Norman Stuart Robertson Fellowships
These awards are made annually to graduate students in the sciences to the value of the annual income.

Peter Rodney Book Prize in Combinatorics or a related Field
Family, friends, and colleagues of Peter Rodney have endowed a fund, the income of which provides an annual award to be given to the best presentation by a Department of Mathematics graduate student at the Ontario Combinatorics Workshop.

Edward S. Rogers Sr. Graduate Scholarships
Edward S. Rogers Jr. has endowed funds for award, based on academic merit, to a graduate student in the Department of Electrical and Computer Engineering. Other factors for consideration include leadership qualities, interest in community service, and financial need. No application required.

Edward S. "Ted" Rogers Fellowship
Edward S. Rogers has donated funds to the Department of Electrical and Computer Engineering to provide a $2,000 award offered annually to an outstanding graduate student in the first year of graduate work in the communications area.

James E. P. Rogers Memorial Fellowship
Awarded to a student studying Social and Administrative Pharmacy and preferably conducting research in the area of community pharmacy.

J. Douglas Roseborough Prize in Zoology
Friends of the late J.D. Roseborough have established a fund, the annual income of which is awarded to a master's or doctoral student in the Department of Zoology. Financial need and academic merit will also be considered. The award may be held once. Apply to the Associate Chair, Graduate Affairs, Department of Zoology.
OSOTF

G. B. Rosenfeld Annual Book Award
Mr. G. B. Rosenfeld has endowed a fund, the income of which is awarded to a meritorious student in Health Administration who best demonstrates academic excellence and dedication to public service.

Eila I. Ross Memorial Scholarship
Awarded to one graduate student in the Division of Biomedical Communications at the Faculty of Medicine. Preference will be given to first or second year students who demonstrate excellence and professionalism in quality of medical illustration and communication output, team participation and leadership skills, and commitment to the profession.

Dr. Klaus Rothfels Memorial Scholarship
Friends and former students of Dr. Klaus Rothfels have endowed funds to provide a scholarship to a graduate student in the Department of Botany or Zoology, on the basis of academic merit and financial need.

Rob Roy Forestry Graduate Travel Awards
Awarded on the basis of academic performance and financial need to Forestry graduate students in support of essential program-related travel and practical work.

John J. Ruffo Graduate Fellowship
Awarded on the basis of academic excellence to Faculty of Medicine graduate students enrolled in the M.D./Ph.D. program.

Robert and Francine Ruggles Family Graduate Fellowship
Awarded to Faculty of Medicine graduate students enrolled in the M.D./Ph.D. program on the basis of academic excellence.

Monica Ryckman Bursary
Through a donation by Mrs. Monica Ryckman, bursaries are available to graduate students in the Department of Computer Science who are otherwise without support. Apply through the Graduate Secretary, Department of Computer Science.

Scace Graduate Fellowship in Alzheimer's Research
Awarded on the basis of financial need and academic merit to graduate students conducting research in the field of Alzheimer's disease. Apply to the Faculty of Medicine. Value: annual income.
OSOTF

Scace Graduate Fellowship in Prostate Cancer Research
Awarded on the basis of financial need and academic merit to graduate students. First preference is to graduate students conducting research in the field of prostate cancer with the Fleck/Tanenbaum Chair in Prostatic Diseases. Second preference is to graduate students doing research in the field of prostate cancer. Apply to the Faculty of Medicine. Value: annual income.
OSOTF

Robin Schaffer Graduate Scholarship
Various donors have provided funds to offer an annual award of $500 to honour the former Director of the Division of Occupational Therapy, Dr. Robin Schaffer. The scholarship is awarded, on the basis of academic merit, to a graduate student with an occupational therapy background entering the first year of the master's program in Rehabilitation Science at the University of Toronto. Financial need may also be considered.
OSOTF

Wilfred George Scott Fellowship in Gerontology
The estate of the late Wilfred George Scott provides for a fellowship of approximately $6,000 for award to a graduate student for gerontological (differentiated from geriatric) research, with particular emphasis on those areas which are psychological or socio-economic in scope rather than medical and clinical. Apply to the Institute for Human Development, Life Course, and Aging by July 15.

Searle Scholarship
Through an annual donation from Searle Canada Inc., a scholarship is available, on the

basis of academic merit, to a full-time incoming graduate student enrolled in the Department of Molecular and Medical Genetics (microbiology program). To be considered for a Searle Scholarship, candidates must apply for an MRC or NSERC award. Value: approximately $15,000 plus $1,000 travel allowance.

Senior Alumni Association Prize in Zoology
Awarded on the basis of financial need to a master's or doctoral student in the Department of Zoology. Academic merit will also be considered. Application required. Value: annual income.
OSOTF

Dick and Peggy Sharpe Student Fellowship in Immunology
The Wellesley Hospital Foundation has provided funds for award, on the basis of financial need, to graduate students in the Immunology Department in the Faculty of Medicine conducting research at the Wellesley Hospital. Value: variable.
OSOTF

Harry C. Sharpe Fellowship
This award, given by the late Harry Sharpe in honour of Alcoholics Anonymous, is awarded to graduate students in the Faculty of Medicine whose studies and research are in the fields of addiction, substance abuse, and/or gerontology. Value: annual income.

Robert Shelley Graduate Scholarship
Robert Shelley has endowed funds for an award, on the basis of academic merit, to an outstanding graduate student in the Department of Astronomy and Astrophysics. Preference given to graduate students conducting research in extra-solar planets. Financial need may also be considered. No application required. Value: annual income.

Theodore I. Sherman Graduate Award in Neuroscience
Revenue Properties Company Limited have generously provided funding for award to graduate students in the Centre for Research in Neurodegenerative Diseases. If a suitable candidate is not found in any given year, the award will be broadened to include other Faculty of Medicine graduate students in the field of neuroscience. Apply to the Faculty of Medicine. Value: variable.
OSOTF

Meredith & Malcolm Silver Scholarship in Cardiovascular Studies
Awarded, on the basis of financial need, to the graduate student with a demonstrated interest in cardiovascular research who maintains or achieves honours standing during his or her residency with the Department of Laboratory Medicine and Pathobiology. Value: annual income.
OSOTF

Siminovitch–Salter Award
The Institute of Medical Science, Mount Sinai Hospital, and U of T's Department of Surgery have endowed funds to provide an annual award to a doctoral student enrolled in the Institute of Medical Science who has displayed outstanding scholarly contribution.

Marguerite Harland Smith Graduate Award in Rehabilitation Science
Dr. Carlton Smith has provided funds, the annual income of which is awarded to a full-time physical therapy graduate student, on admission to the Graduate Department of Rehabilitation Science. The student must be conducting rehabilitation research in neuroscience field. Based on financial need and academic achievement. Apply to the Graduate Department of Rehabilitation Science.

Viola Carless Smith Research Fellowship in Electrical and Computer Engineering
Professor K. C. Smith has endowed funds, the income of which is to be awarded to a graduate in electrical engineering who enrols in the School of Graduate Studies for further work in this field, specifically in electronics or computer related work. Award is based on financial need; academic merit is also considered.
OSOTF

John Robert Gilkison Smyth Mathematics Scholarship
Funds from the estate of the late John Robert Gilkison Smyth provide an annual scholarship for award, on the basis of academic merit, to a graduate student enrolled in the Department of Mathematics.

Lois Snelling Physical Therapy Bursary
Lois Snelling has donated funds to provide awards, on the basis of financial need, to physical therapy doctoral stream students enrolled in the Graduate Department of Rehabilitation Science in the Faculty of Medicine. Apply to the Department of Rehabilitation Science.

Social and Administrative Pharmacy Professors' Award for Thesis Research
Awarded to students in the Graduate Department of Pharmaceutical Sciences pursuing a degree in the area of Social and Administrative Pharmacy. Application required.

Speech Foundation of Ontario Award
Awarded to a student in financial need in the Department of Speech-Language Pathology.
OSOTF

Morey Speigel Memorial Prize—OSOTF
Awarded on the basis of academic merit and financial need to a graduate student in the Faculty of Applied Science and Engineering. Value: annual income.
OSOTF

Paula Square Award of Excellence
Catriona Steele has endowed a fund, the income of which provides an award to a student in the professional Master of Health Science program in Speech-Language Pathology who receives the highest mark in Unit 8. The award is presented at the Annual Awards Breakfast. No application required.

Paul Starita Graduate Student Fellowships
An annual award is offered to Faculty of Medicine graduate students on the basis of financial need who are studying within the field of molecular medicine as it applies to prostate cancer. Value: annual income.
OSOTF

Department of Statistics Doctoral Award
Awarded along with a certificate of acknowledgment to a Ph.D. student in the Department of Statistics. The recipient must have demonstrated excellence in research in the area of statistics or probability. The award is usually given to a senior doctoral student, although all students in the doctoral program are eligible. Value: annual income.

Department of Statistics Graduate Fellowship
The estate of Reginald A. Blyth has established an endowment, the income of which provides a fellowship to a graduate student or students in the Department of Statistics. Recipients must be in good standing and making satisfactory progress towards their degree. Financial need may be taken into consideration. No application required. Value: one or more awards to the value of annual income.

Stelco Fellowship
A donation provided by Stelco Inc. supports students in the Department of Materials Science and Engineering conducting steel related research. Value: annual income.
OSOTF

Edward Christie Stevens Award in Nuclear Physics
Funds from the estate of the late Edward Christie Stevens provide a fellowship for a graduate student engaged in the field of nuclear physics. Value: variable.

Dr. Margaret L. Stoicheff Graduate Award in Speech-Language Pathology
Awarded to a graduate student in the Master of Health Science Professional Speech-Language Pathology program. The award is given on the basis of academic excellence and financial need. Apply to the Department of Speech-Language Pathology by the end of February. Value: annual income.

Hilbert and Reta Straus Award
In memory of Hilbert and Reta Straus, an endowment has been established in the Department of Botany. The annual income of the endowment is awarded annually to a full-time graduate student who has demonstrated high research achievement in the fields of molecular or cellular biology.

Surgical Alumni Fellowship in Surgical Science
Awarded to a graduate student in financial need in the Department of Surgery to allow him or her to undertake formal training leading to a graduate degree in biomedical research or related field. Value: annual income.
OSOTF

Dr. R. B. Sutherland Memorial Award
Friends, relatives, and colleagues of Dr. 'Sandy' Sutherland have endowed funds, the income of which provides an annual award to a graduate student in the Graduate Department of Public Health Sciences who achieves the best performance in the occupational epidemiology course CHL 5410H and who is registered in a program of study directly relevant to occupational health or engaged in occupational health research.

Marlene Ruth Swirsky Memorial Award
Awarded to an M.S.W. student on the basis of financial need and academic merit. Preference is given to students with demonstrated interest and commitment to the field of mental health.

Apply to the Faculty of Social Work, Office of Student Services & Records. First award fall of 2002. Value: annual income.

Tamarack Graduate Award in Diabetes Research
Arthur Spoerri has generously provided funds, the annual income of which is awarded to a graduate student in the Faculty of Medicine connected with the Banting and Best Diabetes Centre. The award recognizes academic excellence and provides needed financial support for graduate students studying diabetes. Preference is given to students whose primary area of study is diabetic retinopathy. Apply to the Banting and Best Diabetes Centre.
OSOTF

Dr. Allan S. Tauber Graduate Student Award
Awarded on the basis of academic excellence to graduate students in the Faculty of Medicine doing research training in the Department of Urology.

Telus Entrance Scholarship
Awarded on the basis of academic merit to a full-time student entering the Master of Engineering in Telecommunications program in the Edward S. Rogers Sr. Department of Electrical and Computer Engineering. Canadian citizens, permanent residents, and international students are eligible.

Neil Duncan Thompson Memorial Scholarship
This award was established in 1996 through an endowment from the estate of Neil Thompson and from family and friends for a graduate student in the Department of Mechanical and Industrial Engineering whose thesis research is in the field of engines or motor vehicles. Value: annual income.
OSOTF

Hillian Titley Graduate Scholarship
Awarded on the basis of financial need to a graduate student in good standing who is interested in gerontological nursing, especially the care of people with dementia. Academic merit will also be considered.
OSOTF

Alan Tonks Scholarship in Transportation Engineering
Friends and colleagues of Alan Tonks, former Chair of Metropolitan Toronto, have generously endowed a scholarship for master's and Ph.D. students in the Transportation Engineering program of Civil Engineering. Scholarships will be awarded to incoming first year students and may be renewed - one year for master's, two years for Ph.D. Awarded on the basis of financial need; academic merit is also considered. Value: variable.
OSOTF

The Toronto Hospital Foundation Graduate Student Scholarship in Urological Research
The Toronto Hospital Foundation provides a fellowship, awarded annually, to a registered student engaged in urological research under the guidance of University of Toronto faculty members located at the Toronto Hospital (or its successor). Value: annual income.
OSOTF

Toronto Rehabilitation Institute Student Scholarships
Available to students in financial need enrolled in any faculty at the University of Toronto who are either in training at the TRI or at another suitable institution, and whose studies will further the strategic directions of the TRI. Contact the Office of the Associate Dean, Graduate and Inter-Faculty Affairs, Faculty of Medicine for further guidelines and application information.

The Edward Jarvis Tyrrell Fellowship
Funds from the estate of Violet Louise Tyrrell, in memory of her husband, provide a fellowship, awarded annually on the basis of academic merit, to a full-time research graduate student in Chemical Engineering and Applied Chemistry.

Unilever/Lipton Graduate Fellowships in Neurosciences
Available to graduate students in the Faculty of Medicine who are studying in the area of neurosciences at the Toronto Hospital. Value: annual income.
OSOTF

Marjorie Van Veen Graduate Scholarship in Human Nutrition
Awarded to graduate students in the Department of Nutritional Sciences, Faculty of Medicine. Preference will be given to students doing graduate research or training in human nutrition.

The Eugene Vayda Scholarship Award
Awarded to an M.H.Sc. or M.Sc./Ph.D. student in the Department of Health Policy, Management and Evaluation demonstrating excellence and promise in program planning and evaluation within the broadly defined area of service integration. Value: annual income.

The Richard Venn and Carol Mitchell Graduate Student Fellowships in Women's Health Research
Awarded on the basis of financial need to students in Women's Health Research, supervised by faculty members at Mount Sinai Hospital and/or its Samuel Lunenfeld Research Institute.
OSOTF

Douglas Verrier Memorial Bursary
Awarded to graduate students in the Department of Physical Therapy on the basis of financial need. Preference will be given to students who have expressed special needs, whether of health hardship or a family issue. The bursary is awarded at the discretion of the Chair of the Department of Physical Therapy in consultation with one other faculty member. Application required. Value: annual income.
OSOTF

Molly Verrier Award
Awarded to a graduating M.Sc. student in the Department of Physical Therapy who has achieved high academic standing, who actively participates to advance the practice of Physical Therapy, and to empower classmates.

Vietnamese-Canadian Community Graduate Award in Zoology
Awarded on the basis of academic merit to a student studying Zoology.

Vision Science Research Graduate Student Awards
Two types of awards are available:
1. Awarded to graduate students involved in vision research whose supervisors are members of the joint University of Toronto/Toronto Hospital vision science research program. Recipients are selected on the basis of financial need by a committee and the Chair of the Department of Ophthalmology
2. Awarded to graduate students enrolled in the clinician scientist program or the M.D./Ph.D. program of the Faculty of Medicine.
Academically qualified recipients are selected on the basis of financial need by a committee chaired by the Dean of the Faculty of Medicine. Apply to the Vice-Dean, Research, Faculty of Medicine. Amount: variable.
OSOTF

Seymour H. Vosko Memorial Prize
Family and friends of Seymour H. Vosko have endowed a fund to establish an award for a female graduate student in the Department of Physics.
OSOTF

E. M. Walker Graduate Award in Biodiversity
Dr. Rosemary Speirs has endowed funds to provide an award to a graduate student in Zoology.
OSOTF

Walker/Marshall Prize
Awarded on the recommendation of the Department of Medical Biophysics to doctoral students on the basis of financial need. Preference will be given to students in their final year of study. Selection is based on the uniqueness and significance of work, academic and publication record, and contribution to student life in the Department. Application is by nomination to the Student Affairs Committee. Value: annual income.
OSOTF

The Wallberg Research Fellowships
The Wallberg Research Fellowships, each with a value of $2,400, are open to graduates of a recognized university who are pursuing advanced study and research in any branch of engineering in the School of Graduate Studies.

Edwin Walter Warren Graduate Student Awards
Awarded to one or more graduate students in the Department of Chemistry on the basis of academic merit and financial need. Value: annual income.
OSOTF

Jeannette Elizabeth Watson Memorial Fellowship
Awarded on the basis of academic merit to a graduate student in the Department of Nursing Science specializing in medical or surgical nursing. Apply to the Faculty of Nursing Awards Committee by March 31. Value: annual income.

Beverly Wedemire Scholarship
Family, friends, and colleagues of Beverly Wedemire have donated funds for an annual $500 scholarship for award, on the basis of academic merit, to a graduate student engaged in the area of cancer research. The award was established in honour of Beverly Wedemire, an administrative staff member in the School of Graduate Studies for over 20 years.

Walter and Anne White Graduate Scholarship
Estate of Louise Ann White provides funds for an award to a graduate student in the Department of Physics. No application required.
Value: annual income.

Dalton Whitebread Scholarship Fund
Provides graduate student support in the Faculty of Medicine on the basis of financial need. Prioritized by the Dean of Medicine. Apply to the Faculty of Medicine. Value: annual income.

Leon and Blossom Wigdor Award for Studies in Aging
Dr. Wigdor has established a fund that provides an annual award of $2,000 to a graduate student studying the psychological, social, or behavioural sciences of aging. The award is made on the basis of financial need and academic merit. Preference is given to students enrolled in the Collaborative Program in Aging and the Life Course.
OSOTF

Judy Willcocks Memorial Bursary
This bursary honours Judy Willcocks, a graduate of the 1961 class of Physical and Occupational therapy, who adapted to lifelong chronic illnesses with courage and grace. Awarded to a full-time Rehabilitation Science student.
OSOTF

Glynn Thomas Williams Fellowship
Through a generous gift provided by Mr. Glynn Thomas Williams, this award is given to a first-year doctoral student in the Department of Mechanical and Industrial Engineering whose research has potential for commercial application that could benefit Canadians. Value: annual income.
OSOTF

Elizabeth Ann Wintercorbyn Awards in Botany
An endowment from the estate of the late Elizabeth Ann Wintercorbyn provides two awards to graduate students in the Department of Botany. One award is made annually to a student engaged in research which is likely to prove beneficial to agriculture, and one award is made for research beneficial to medicine. Each award is valued at half of the annual income.

Carin Wittnich Award of Excellence for Teaching Assistants
Awarded to the top-ranked teaching assistant in the Department of Physiology's graduate Ph.D. or master's program for the past academic year. The award is based on evaluations by undergraduate students and the Teaching Coordinator.

Wolfond Scholarship Program in Wireless Information Technology
Awarded on the basis of academic merit to graduate students in the Department of Computer Science pursuing research in areas related to wireless information technology. Scholarship recipients will be known as Wolfond Fellows. Value: annual income.

Graduate Fellowship for Research in Women's Health and Physical Activity
Awarded on the basis of acceptance into the program and academic merit determined by grades, publications, presentations, and research. Renewable for one year upon review. Candidates may apply or nominations may be submitted by a faculty, student, or staff member of the Faculty of Physical Education and Health. Value: annual income.

Institute for Work and Health Graduate Fellowship
Awarded on the basis of financial need to graduate students who are studying within the broad area of work and health.
OSOTF

George F. Wright Organic Cumulative Performance and Organic Seminar Awards
Friends and colleagues of the late George F. Wright have donated funds to provide two awards of $150 each to graduate students in the Department of Chemistry. The awards will be based on performance in the organic cumulative examinations and in the regular organic seminar.

Ramsay Wright Scholarship
This scholarship was established to encourage research in Zoology. Value: annual income.

The Alan Wu Research Award
Friends and associates of the late Dr. Alan Wu have endowed funds to provide an award in his honour. A minimum cash award of $200 is granted to the graduate student presenting the best poster at the Scientific Day of the Institute of Medical Science.

Xerox Research Centre of Canada Graduate Award in Chemistry
The Xerox Research Centre of Canada provides two awards to graduate students in the Department of Chemistry. One of the awards must be made to a student in the field of materials chemistry related to information and computer technology in line with the business interest of the Xerox Research Centre of Canada.

Financial need and academic merit are also considered.
OSOTF

Allen Yen Scholarship
Awarded to a doctoral-stream student registered in the Edward S. Rogers Sr. Department of Electrical and Computer Engineering studying electrical engineering. This student must display high academic achievement and demonstrate financial need. Apply to the Department of Electrical and Computer Engineering. Value: annual income.

May Yoshida Scholarship
Through the generosity of friends and colleagues of Professor May Yoshida, an award, based on academic merit, is available to a full-time incoming doctoral student in the Graduate Department of Nursing Science.
OSOTF

Yow Kam–Yeun Graduate Scholarship in Diabetes Research
For award, on the basis of financial need, to a graduate student in the Faculty of Medicine connected with the Banting and Best Diabetes Centre. Value: annual income.
OSOTF

Adam Zimmerman Graduate Fellowships in Forest Conservation
Awarded on the basis of academic merit to one or more students pursuing a graduate degree in forest conservation in the Faculty of Forestry. Value: annual income.

James R. Zimmerman Memorial Graduate Award
Susan Zimmerman, family, and friends have endowed a fund which awards a student in the first year of a Ph.D. program affiliated with the Lassonde Institute. Successful candidate must be a member of the Lassonde Institute. The award is made on the basis of outstanding academic record and demonstrated ability for advanced research. No application required. Value: annual income.

Zindart Graduate Award for Nursing Care of Persons with Cancer
Awarded to a full-time student entering the final year or a part-time student completing at least 50% of the program requirements. The recipient must demonstrate academic excellence in courses related to Oncology Nursing. Apply by letter addressing the criteria and include one letter of reference from a faculty member.

Zoology International Scholarship
Professor Yoshio Masui has endowed funds to provide for two annual scholarships of approximately $750 each to foreign students registered as full-time graduate students in the Department of Zoology. Awarded on the basis of academic performance and financial need.

Zoology Sesquicentennial Graduate Award
Awarded on the basis of academic merit to a full-time graduate student in the Department of Zoology. Financial need may also be considered. Value: annual income.

Zophia Nurse Practitioner Fellowship
Awarded, on the basis of academic merit and financial need, to master's students and/or post-master's students in the Graduate Department of Nursing Science who are entering or continuing their study as Acute Care Nurse Practitioners. Apply to the Faculty of Nursing Awards Committee by March 31. Value: annual income.
OSOTF

2. FELLOWSHIPS AWARDED BY GOVERNMENT AGENCIES
(Note: Deadlines subject to change)

Canada Graduate Scholarships
Canada Graduate Scholarships (CGS) provide financial support to outstanding graduate students pursuing master's or doctoral studies in a Canadian university. When fully implemented in 2006, there will be 2,000 doctoral awards (each valued at $35,000 annually) and 2,000 master's awards (each valued at $17,500 annually).

CGS are awarded through national competitions held by three granting agencies: CIHR, NSERC, and SSHRC. Refer to sections below on other awards offered by these agencies. For doctoral CGS and master's CGS in natural sciences and engineering, the award competitions are held at the same time as the CIHR Doctoral Research Award, NSERC Post Graduate Scholarships, and SSHRC Doctoral Fellowships.

CIHR Doctoral Research Awards
Doctoral Research Awards are intended to provide special recognition and support to students pursuing a doctoral degree in the health sciences in Canada. Candidates are expected to have an exceptionally high potential for future research achievement and productivity. The program is open to Canadian citizens and permanent residents of Canada. Only those stu-

dents engaged in full-time research training in a Canadian graduate school are eligible for support. At the time of application, candidates must have completed at least 12 months of graduate study at the master's or Ph.D. level and have been registered for no more than 26 months as a full-time student in a doctoral program. Deadline: October 15. Late or incomplete applications will not be considered. Awardees receive an annual stipend of $20,000 for awards held inside Canada and $25,000 for awards held outside Canada. Program guidelines and applications available at www.cihr.ca.

Commonwealth Scholarship Plan
Under this plan various governments within the Commonwealth provide scholarships, mainly for postgraduate study, tenable in their countries by students from other parts of the Commonwealth. The emoluments are intended to cover expenses of travel, living, and tuition during tenure of the scholarship.

Details from the relevant government office in the applicant's own country or the Canadian Commonwealth Scholarship Plan, c/o International Council for Canadian Studies (ICCS), 75 Albert Street, S-908, Ottawa, Ontario, K1P 5E7. Telephone: (613) 789-7828, e-mail: general@iccs-ciec.ca. Web: www.scholarships-bourses-ca.org/.

Department of National Defence Security and Defence Forum Scholarship Programs
The Department of National Defence has established a number of scholarships within the framework of strategic studies of relevance to current and future Canadian security. Studies may relate to any of the economic, political, military, technological, or sociological dimensions of national security. Applicants must be Canadian citizens.

Ph.D. scholarships are valued at up to $16,000 and M.A. scholarships up to $8,000.

Closing date for receipt of applications is February 1. For further information and submission of application forms contact the Canadian Awards Program, International and Canadian Programs Division, Association of Universities and Colleges of Canada (AUCC), Suite 600, 350 Albert Street, Ottawa, Ontario, K1R 1B1. Telephone: (613) 563-1236, e-mail: awards@aucc.ca, Web: www.aucc.ca.

Natural Sciences and Engineering Research Council of Canada
NSERC offers postgraduate awards to assist students pursuing graduate study and research leading to advanced degrees. Post-doctoral fellowships for those wishing to add to their experience by specialized training are also available. These scholarships and fellowships are awarded on the basis of high scholastic achievement and evidence of skill at research.

All correspondence should be addressed to: Natural Sciences and Engineering Research Council of Canada, 350 Albert Street, Ottawa, Ontario, K1A 1H5. Awards are restricted to Canadian citizens and permanent residents. Value: $17,300-21,000. Web: www.NSERC.ca. Application deadline: early October.

Public Safety and Emergency Preparedness Canada Research Fellowships Program in Honour of Stuart Nesbitt White
A fellowship to support research and training in disasters and emergency planning in Canada is offered for graduate study in any appropriate department. This fellowship is valued at $13,500 (Canadian funds) per annum. Apply by March 28 to International and Canadian Programs Division, Association of Universities and Colleges of Canada (AUCC), Suite 600, 350 Albert Street, Ottawa, Ontario, K1R 161. Telephone: (613) 563-1236, e-mail: awards@aucc.ca, Web: www.aucc.ca.

Ontario Graduate Scholarships
The Government of the Province of Ontario provides 2,000 graduate scholarships tenable at Ontario universities. Sixty awards are available to visa students. These scholarships are available to students in all disciplines and are tenable only at Ontario universities. Value: $15,000 for a three-term academic year or $10,000 for two terms. The Province of Ontario contributes two-thirds and the University provides one-third (for the latter, see OGS listing under Awards Offered by the University). Application forms may be obtained from your graduate unit or from Student Support, Ministry of Education and Training, P.O. Box 4500, Fourth Floor, 189 Red River Road, Thunder Bay, Ontario, P7B 6G9, or call 1-800-465-3957. Submit applications to your graduate unit by the October deadline. Web: osap.gov.on.ca/eng/not–secure/OGS.htm.

Ontario–Quebec Exchange Fellowships
The two provincial governments will respectively award up to ten fellowships, with a value of $10,000 each for master's–level students and $12,000 for doctoral students. Ontario residents may obtain application forms from the Graduate Studies Office of any Ontario university or by contacting the Ontario-Quebec Exchange Fellowship Program, Student Support, Ministry **of** Education and Training, P.O. Box 4500, Fourth

Floor, 189 Red River Road, Thunder Bay, Ontario, P7B 6G9. Toll free telephone: 1-800-465-3957. Deadline: end of January. Web:osap.gov.on.ca/eng/not_secure/OQ.htm.

Sir John A. Macdonald Graduate Fellowship in Canadian History
The Government of the Province of Ontario makes available each year one fellowship of $8,500. The award is tenable for three years, making its maximum value $25,500. The fellowship is awarded to a candidate preparing to enter a Ph.D. program, but in exceptional circumstances may be awarded to a candidate preparing to enter a master's program. This fellowship is tenable only at an Ontario university and is awarded to a candidate who is a Canadian citizen resident in Ontario, undertaking graduate studies with a major emphasis on Canadian history.

Deadline: mid-March for students not currently registered in an Ontario university. Students who are currently registered should consult their graduate unit. Information and application at Web: osap.gov.on.ca/eng/not–secure/MAC.htm.

3. FELLOWSHIPS AWARDED BY OTHER OUTSIDE AGENCIES

Note: Deadlines subject to change

Viscount Bennett Fellowship
Under the terms of a deed of gift to The Canadian Bar Association from The Right Honourable Viscount Bennett, the Viscount Bennett Trust Fund was established. Up to $20,000 may be paid annually as a fellowship for graduate study in law in an institution of higher learning to be approved by the committee. The fellowship is open to a Canadian citizen who has graduated from an approved law school in Canada or who at time of application is pursuing final year studies as an undergraduate student at an approved law school.

Applications must be submitted to the Senior Director of Communications, the Canadian Bar Association, Suite 902, 50 O'Connor Street, Ottawa, Ontario, K1P 6L2 by November 15. Telephone: (613) 237-2925 or 1-800-267-8860 ext. 154, e-mail: stephenh @cba.org., Web: **cba.org/CBA/Awards/Viscount–bennett/.**

Doctoral Scholarship for Canadian Women Kappa Kappa Gamma Foundation of Canada
Awarded to a full-time female Ph.D. candidate in any discipline who is a Canadian citizen. Application available from the Fellowships and Loans Office. Deadline: January 31. Value $3,000. Web: www.kappa.org

The Canadian Federation of University Women Fellowships

Margaret McWilliams Pre-doctoral Fellowship	$11,000
Dr. Marion Elder Grant Fellowship	$10,000
Beverley Jackson Fellowship	$2,000
1989 Polytechnique Commemorative Award	$2,800
Alice E. Wilson Award	$5,000
CFUW Memorial Fellowship	$6,500
Bourse Georgette Lemoyne	$6,000

Candidates must be Canadian citizens or must have held permanent resident status for one year prior to submitting application.

Further information may be obtained from the Canadian Federation of University Women, 251 Bank Street, Suite 600, K2P 1x3, Telephone: (613) 234-8252; Web:www.cfuw.org/english/fellowship.html.

Applications are available on Web site in May and must be submitted before November 1.

Canadian Nurses' Respiratory Society Fellowships and Research Grants
This award is available for master's or postmaster's study in the clinical specialty of respiratory nursing in an approved program. Application should be made to The Canadian Lung Association, 3 Raymond Street, Suite 300, Ottawa, Ontario, K1R 1A3, before November 1. Telephone: (613) 569-6411. Web: www.lung.ca/research/

The Chinese Canadian History and/or Culture Fellowship
The fellowship is offered to a graduate or postgraduate student who intends to enrol at the University of Toronto and to engage in research in the history, cultural or social composition of a Chinese–Canadian community. The fellowship has a value of $6,000 for graduate students or $7,000 for postgraduate students, and is funded by the Toronto Chinese Businessmen's Association and the Federation of Chinese Canadian Professionals (Ontario).

Selection of the fellowship recipient is based on academic achievement and on the nature and merit of the research proposal. In order to

qualify for consideration, candidates must be fluent in a Chinese dialect. Apply to Admissions and Awards, University of Toronto, 315 Bloor Street West, Toronto, Ontario, M5S 1A3. Deadline: April 30.

Delta Kappa Gamma World Fellowship
The Delta Kappa Gamma Society International is an organization of professional women in the field of education. A fellowship for graduate study is offered to a female graduate student in the amount of US$4,000. To be eligible an applicant must be a female student from a country other than Canada or the United States studying under a student authorization. Applications are available from the Fellowships and Loans Office, 63 St. George Street, Toronto, Ontario, M5S 229. Deadline: early December.

Naomi Grigg Fellowship
The fellowship is for full-time students in a master's or Ph.D. program in an area of gerontology. Maximum value: $7,500. For further information, contact Soroptimist International of Toronto, 135 Donlea Drive, Toronto, Ontario, M4G 2M7. Telephone: (416) 423-5796. Deadline: March 31.

Heart and Stroke Foundation of Canada Nursing Research Fellowship
The fellowship is open to nurses undertaking research in the cardiovascular or cerebrovascular fields leading to a master's or doctoral degree. Value: 25,000 per annum. Applications should be made to the Heart and Stroke Foundation of Canada, Research Department, 222 Queen Street, Suite 1402, Ottawa, Ontario, K1P 5V9, by March 15. Web: www.hsf.ca/research/guidelines/g-6.html

IODE Scholarships
A maximum of nine scholarships are awarded to candidates who are Canadian citizens, hold a first degree from a recognized Canadian university, and are enrolled in a doctoral program. Value: $12,000 for study in Canada; $15,000 for study overseas within the Commonwealth. Deadline: December 1. Information and applications available from the Head Office, IODE, Suite 254, 40 Orchard View Boulevard, Toronto, Ontario, M4R 189, (416) 487-4416, e-mail: iodecanadaa sympatico.ca, and the Fellowships and Loans Office, 63 St. George Street, Toronto, Ontario, M5S 229.

Kirshenblatt Memorial Scholarships
Annual awards of $2,000 are available for study or research in a program related to gerontology or gerontological nursing. Applicants must be Canadian citizens or permanent residents intending to work in Canada. Applications are available from The Toronto Rehabilitation Institute, Research Administration Office, 550 University Avenue, Room 1202, Toronto, Ontario, M5G 2A2. Telephone: (416) 597-3422 ext. 3771. Deadline: April 30.

MacKenzie King Travelling Scholarships and MacKenzie King Open Scholarship
In the will of the late Right Honourable William Lyon MacKenzie King, provision was made to award annually a number of MacKenzie King Travelling Scholarships and one MacKenzie King Open Scholarship.

The MacKenzie King Travelling Scholarships are open to graduates of any Canadian university for study either in the United States or the United Kingdom in the field of international or industrial relations (including the international or industrial aspects of law, history, politics, economics).

The MacKenzie King Open Scholarship is open to graduates of any Canadian university for study in Canada or elsewhere in any field.

Candidates are required to apply by February 1 to the Canadian university from which they have received, or will receive, their most recent degree. Applications are available from www.mkingscholarships.ca, and the School of Graduate Studies, Fellowships and Loans Office, 63 St. George Street, Toronto, Ontario, M5S 229.

Registered Nurses Foundation of Ontario (RNFO)
The RNFO Foundation offers scholarships for graduate studies in nursing education. For scholarship details contact Denise King at RNFO Foundation, 1185 Eglinton Avenue East, Suite 104, Toronto, Ontario, M3C 3G3, by March 15. Telephone: (416) 426-7127. Web site: www.rnfoo.org.

4. LOANS, GRANTS, AND OTHER BURSARIES

Graduate Students' Emergency Loan Fund
This fund has been established in the School of Graduate Studies to assist full-time students to meet financial problems which could not have been anticipated. Full information is available from the Fellowships and Loans Office, 63 St. George Street.

Ontario Student Assistance Program
OSAP applications are available on the Web: osap.gov.on.ca. Also from Admissions and Awards, University of Toronto, 315 Bloor Street West, Toronto, Ontario, M5S 1A3, telephone: (416) 978-2190 and the School of Graduate Studies.

School of Graduate Studies Travel Grants
The grants are available to a limited number of doctoral students in the humanities (including the humanistic side of the Social Sciences) for research or study outside Canada.

Application forms are distributed to graduate coordinators in March, and additional forms and information may be obtained from the Fellowships and Loans Office, 63 St. George Street, Toronto, Ontario, M5S 229. Applications available in March, deadline: mid-April.

University of Toronto Bursary Assistance
Bursaries are available to full-time graduate students on the basis of need. Special or part-time students are not eligible. Funding is limited and is specifically for emergencies arising from unforeseen circumstances. First year students are normally not eligible for consideration. Students with scholarship support or who are eligible for OSAP are normally not eligible for bursary funding. Application is through the departmental graduate coordinator.

5. TEACHING AND RESEARCH ASSISTANTSHIPS

For information concerning teaching and research assistantships, write directly to the chair of the department concerned giving full particulars of academic training and experience.

6. STUDENT EXCHANGE PROGRAMS

A number of student exchange programs are available to graduate students. For the full listing, visit the International Student Exchange Office Web site: www.utoronto.cd student.exchange/office.html.

5

General Information

In this section:

Accessibility Services
Athletic Centre
Career Centre
English Language and Writing Support
Equity Issues Advisory Group
Family Care Office
Graduate Students' Union (GSU)
Hart House
Health Service
Housing
International Student Centre (ISC)
Library System
Ombudsperson
Sexual Harassment

ACCESSIBILITY SERVICES

Accessibility Services
St. George Campus
Robarts Library
130 St. George Street
Toronto, Ontario
M5S 3H1
Voice: (416) 978-8060
TDD: (416) 978-1902
Fax: (416) 918-8246
E-mail: disability.services@utoronto.ca
Web: disability.sa.utoronto.ca

AccessAbility Services
University of Toronto at Scarborough
Room S302A
Voice/TTY: (416) 287-7560
Fax: (416) 287-7334
E-mail: ability@utsc.utoronto.ca
Web: www.utsc.utoronto.ca/~ability

AccessAbility Resource Centre
University of Toronto at Mississauga
Room 1113, South Building
TDD/voice: (905) 828-5406
Fax: (905) 569-4366
E-mail: access@utm.utoronto.ca
Web:www.utm.utoronto.ca/access

University Commitment
The University's statement of institutional purpose states: 'The University of Toronto is dedicated to fostering an academic community in which the learning and scholarship of every member may flourish with vigilant protection for individual human rights and a resolute commitment to the principles of equal opportunity." The University's "Statement of Commitment Regarding Persons with Disabilities" is part of the U of T Ontarians with Disabilities Act Plan 2004-05 and can be found on www.accessibility.utoronto.ca.

Faculty and staff carry a responsibility for creating and maintaining a community that is inclusive of all persons and treats all members of the community in an equitable fashion, responding appropriately to requests for accommodation of a disability per the Ontario Human Rights Code "Guidelines on Accessible Education" (2004) http://www.ohrc.on.ca/english/consultations/ed-consultation-report.shtml.

Accessibility Services encourages a three way partnership with the University's faculty, staff and students regarding appropriate accommodations, information about disabilities, and community resources.

Responsibilities of Students who have Disabilities

Students who request accommodations for their academic programs and related activities at the University are obligated to disclose their disabilities to the respective campus Service for Students with Disabilities and request accommodations in a timely manner to facilitate the implementation of support and services. It is vitally important that students discuss their needs as early as possible with the Service in order to put accommodations in place. Students must present relevant and up-to-date documentation, as outlined on the Web site, from an appropriate health care professional. Any information about a student's disability is confidential and is not shared outside the Service unless the student gives permission. Students are encouraged to meet and discuss their academic accommodation needs with their instructors.

Support Services For Students

There are offices on all three U of T campuses that work to facilitate the inclusion of students with disabilities into all aspects of university life. The focus is on skills development, especially in areas of self-advocacy and academic skills. Services are provided to students who have a physical, sensory, or learning disability, mental health disability, acquired brain injury or chronic health condition (e.g., epilepsy, cancer, bowel disease) as well as students who have temporary disabilities such as a broken dominant arm.

The Service provides a wide range of support, including:

- learning disability assessments
- adaptive technology assessments
- adaptive equipment
- learning strategy support
- test and examination accommodations
- note-taking services
- sign language interpreters
- computer note-taking
- advice and information on disability issues
- liaison to University and off-campus agencies campus transportation (St. George campus only)

To access the Service, students make an appointment to meet with an advisor to discuss individual needs, accommodations, and strategies for success. Where appropriate, students are referred to one of the professionals on staff for an assessment to identify strategies and determine accommodations.

There is a Bursary for Students with a Disability (BSWD) for students who have applied and established eligibility for OSAP. The BSWD helps students with disability-related educational costs while attending post-secondary institutions. University alternate bursaries are also available for eligible students.

ATHLETIC CENTRE

55 Harbord Street
Toronto, Ontario
M5S 2W6

Telephone:

Pre-recorded building hours and schedules	978-3437
Program information	978-3436
Varsity Blues Events information	978-GAME (4263)
Court reservation	978-3436
Intramurals	978-5845
Intercollegiate Office	978-3443
Sports Medicine Clinic	978-4678
Varsity Arena and Field	978-7388

Web: www.utoronto.ca/physical

The Athletic Centre (AC) is a great place to relax, meet people, exercise, learn and play. It offers programs for people at all levels of physical skill and interest. All full-time and part-time students are members of the AC through the payment of their incidental fees.

Located on the southeast corner of Harbord Street and Spadina Avenue, the AC houses an impressive array of programs and facilities, including 12 squash courts; 3 swimming pools (Olympic, 25-yard and learn-to-swim); an indoor track and field house with 200-metre track; 8 gymnasia; strength-training facilities; 4 multi-purpose courts for badminton, basketball, tennis and volleyball; a dance studio; a cardio training area; and the David L. MacIntosh Sport Medicine Clinic.

Programs, activities, and services include more than 30 free fitness classes a week; hundreds of hours of recreational activities and instruction programs in fitness, dance and movement, aquatics and sport; personal trainers and fitness testing; and an extensive children's program. The programs also include the largest intercollegiate and intramural programs available in Canada. U of T intramurals is one of the best ways to be active and to meet students from across the University. Supporting the Varsity Blues

intercollegiate program is another great way to get involved at U of T, whether it's as an athlete or an ardent fan.

Detailed information about AC programs is found in the *AC Guide,* published twice a year and available online at www.utoronto.ca/physical. Information on the Varsity Blues is available at www.varsityblues.ca.

The AC is operated by the Faculty of Physical Education and Health, which also runs the athletic programs at Varsity Arena, Varsity Field, and on the front and back campuses. Students are actively involved in this management through the Faculty's governance structure. All U of T students are eligible to participate on the Council of Athletics and Recreation (CAR), which is responsible for overall policy, including allocation of funds to program areas, staffing, rentals, and fees. For more information on governance, contact (416) 978-2136.

The AC strives to create an inclusive environment for all program and activity participants regardless of their skill level, ability, or area of interest, The Faculty is committed to developing, advancing, and disseminating knowledge about physical activity, health, and their interactions through education, research, leadership, and the provision of opportunity.

CAREER CENTRE

University of Toronto Career Centre
Koffler Student Services Centre
214 College Street
Toronto, Ontario
M5T 229

Telephone: (416) 978-8000
Web: www.careers.utoronto.ca

The Career Centre has developed the following services to meet the career planning and employment needs of the graduate student population.

Graduate Dossier Service
The Graduate Dossier Service is a repository of information for doctoral candidates seeking academic positions. Responding to a request from a student or an institution, the student's curriculum vitae, confidential letters of reference, and university transcripts are copied and mailed to prospective employer institutions. Further information and registration kits may be obtained from the Career Centres located on all three campuses. However, the service itself is only available on the St. George campus.

Career Counselling/Career Talks
Counsellors assist students one-on-one with career development plans. This includes identifying skills, clarifying options, and teaching students how to research occupations.

Career Development and Employment Search Seminars
A variety of seminars are available to assist graduate students with career planning, conducting an effective employment search, writing proper resumes and academic curricula vitae, and preparing for employment interviews.

Graduating Students Employment Service
A number of Fortune 500 companies, government agencies, and organizations who anticipate their hiring needs six to eight months in advance arrive on campus to recruit the graduating class. The majority of these organizations are from the business and technical sectors and many express an interest in recruiting master's and doctoral students.

Recent Graduates Employment Service
This service is designed to assist recent University of Toronto graduates seeking immediate full-time employment to develop a marketing plan. Employment opportunities listed with this service represent a good cross-section of what is available in the current employment market.

Career and Employment Information
Graduate students are invited to visit the Career Centre's resource library which contains information on a wide range of careers and has an extensive employer section.

Resume Clinic
Students may have their resumes and covering letters reviewed before sending them to potential employers. Appointments to review academic curricula vitae are made directly with a career counsellor.

Practice Interviews
Students interested in fine-tuning their interview skills may schedule a 30-minute one-on-one session with a counsellor to receive valuable feedback and tips on how to improve their performance.

Student Outreach Service
Tailored career development presentations may be arranged and delivered at specific departments for groups of at least 30. For further information, contact Mary Giamos at (416) 978-8012 or at m.giamos@utoronto.ca.

ENGLISH LANGUAGE AND WRITING SUPPORT (ELWS)

Dr. Jane Freeman, Director
Room 109, 63 St. George Street
School of Graduate Studies
University of Toronto
Toronto, Ontario
M5S 229

Telephone: (416) 946-7314
Fax: (416) 978-4367
E-mail: jane.freeman @utoronto.ca
Web: www.sgs.utoronto.ca/english

The School of Graduate Studies has established an Office of English Language and Writing Support (ELWS) to provide professional development to graduate students who wish to improve their oral and written communication skills. ELWS offers individual consultations and a range of workshops and non-credit courses for both native and non-native speakers of English. Programs are free to registered graduate students. For course/workshop descriptions, registration links and procedures, and information on how to book an individual consultation, visit the ELWS Web site at www.sgs.utoronto.ca/english.

EQUITY ISSUES ADVISORY GROUP

Web: www.library.utoronto.ca/equity/

The Equity Issues Advisory Group is a coalition of offices charged with promoting the equality of all persons at the University of Toronto. The Group advises the University administration on how the University can best realize its commitment to human rights. It provides guidance on specific equity issues as they arise. While each office operates independently, the officers meet regularly to share expertise, exchange information, and coordinate priorities and activities.

Any member of the University community is welcome to contact the appropriate office with questions, complaints, or issues. Many of the offices have a range of education and information resources. If you are not sure which office can most appropriately address your particular concern, call the general inquiry line.

General Inquiry
Telephone: (416) 946-5624
Fax: (416) 946-8626
Web: www.library.utoronto.ca/equity/

Accessibility Services
Programs and services for students with a disability

Accessibility Services, St. George Campus
Voice: (416) 978-8060
TTY: (416) 978-1902
Fax: (416) 978-8246
Web: disability.sa.utoronto.ca

AccessAbility Resource Centre, U of T at Mississauga
TDD/voice: (905) 828-5406
Fax: (905) 569-4366
Web: www.utm.utoronto.ca/~w3access

AccessAbility Services, U of T at Scarborough
Voice/TTY: (416) 287-7560
Fax: (416) 287-7334
Web: www.utsc.utoronto.ca/~ability

More details about this office appear in a separate entry above.

Community Safety Coordinator
Telephone: (416) 978-1485, 978-0385
Fax: (416) 946-8296
Web: www.utoronto.ca/community/safety

Diversity Relations Office, U of T at Mississauga
Telephone: (905) 569-4716
Fax (905) 569-4652
Web: www.erin.utoronto.ca/diversity

Family Care Office
Telephone: (416) 978-0951
Fax: (416) 946-5466
E-mail: family.care@utoronto.ca
Web: www.library.utoronto.ca/familycare

More details about this office follow in a separate entry below.

Lesbian, Gay, Bisexual, Transgendered, Queer Resources and Programs Office
Telephone: (416) 946-5624
Fax: (416) 971-2037
Web: lgbtq.sa.utoronto.ca

Race Relations and Anti-Racism Initiatives Office
Telephone: (416) 978-1259
Fax: (416) 946-8296
Web: www.library.utoronto.ca/equity/race

Sexual Harassment, Education, Counselling and Complaint Office
Telephone: (416) 978-3908
Fax: (416) 971-2289
Web: www.utoronto.ca/sho/

More details about this office follow in a separate entry below.

Status of Women Office
Telephone: (416) 978-2757/2196
Fax: (416) 971-2295
Web: status-women.utoronto.ca

FAMILY CARE OFFICE

Koffler Student Services Centre, Main Floor
214 College Street
Toronto, Ontario
M5T 229

Telephone: (416) 978-0951
Fa: (416) 946-5466
E-mail: family.care@utoronto.ca
Web: www.library.utoronto.ca/familycare
Hours: Mon, Wed to Fri:
9:00 a.m. to 5:00 p.m.
Tues:
9:00 a.m. to 7:00 p.m.

Many students balance family obligations with their studies; the University of Toronto is committed to fostering a family-friendly learning and working environment. The Family Care Office is a service that provides information, guidance, referrals, educational programming, and advocacy for the University of Toronto community. Our office can assist students who require information on child care (facilities, programs, or subsidies), elder care, and other family matters. Additional services include discussion and support groups, such as our Student Parent Group and our Fathers' Group. We also offer many workshops including "Choosing Child Care that Works for Your Family" and "Financial Survival for Student Families". The Family Care Office maintains a resource centre containing practical material on family issues ranging from pregnancy and infant care to lesbian and gay parenting and caring for elderly family members. The resource centre also contains information for university families on activities and facilities on campus and in the community. Please contact us by phone, e-mail, or simply drop-in.

GRADUATE STUDENTS' UNION (GSU)

16 Bancroft Avenue
Toronto, Ontario
M5S 1C1

Telephone: (416) 978-2391, 978-6233, 978-8464
Fax: (416) 971-2362
E-mail: info.gsu@utoronto.ca
Web: www.gsu.utoronto.ca

The GSU is located in the heart of the Earth Sciences Centre, between Spadina and Huron, two blocks north of College Street.

The GSU is the student union representing the 12,000 full-time and part-time graduate students at U of T and OISE/UT. Payment of the incidental fee automatically entitles graduate students to membership in the Union and to full use of all facilities and services.

The GSU provides a wide range of services for graduate students, including political representation at all levels of University government and assistance in cutting through bureaucratic red tape.

Supplementary Health Insurance Plan: All full-time students paying GSU fees are covered. The plan pays for 80% of prescription drugs plus other benefits. Dental coverage is available only if dental care is required as the result of an accident. In September (or January for students starting then), students may purchase family coverage or opt out if they have equivalent coverage. See the GSU Web site for complete details and forms.

The GSU Pub, fully licensed and non-profit, is open from noon until midnight, Monday to Friday. (416) 978-8466. The Pub is a great place to hold special events and to relax with colleagues.

Sylvester's Cafe (upstairs in the GSU) is open from 9:00 a.m. to 3:30 p.m. and serves delicious breakfasts and lunches. Check out the menu on the Web site. Catering is available. (416) 978-5247.

The GSU Gym may be booked for basketball, badminton, and volleyball. Space may be booked on the last Thursday of the month (for the following month) from 10:00 a.m.

International Student Identity Cards, available free to all GSU members, provide great discounts for air and rail travel. Call for information and an appointment.

Fantastic Book Sales: Two a year (Fall and Spring). Call for details or watch for postings from your course union representative.

Graduate Course Unions are organized by students within every department (over 75 in

total) and are funded by the GSU. Students elect a representative to attend GSU Council which meets eight times a year. This representative is your primary contact regarding GSU events and news. Contact Charlotte Reeve at (416) 978-8464 to find out about your Course Union.

The GSU Executive is elected every March and consists of five officers: President, Vice-President (Internal), Vice-president (External), Secretary, and Treasurer. Four Executive Members-at-Large are elected by the GSU Council.

The GSU Office Staff keep the GSU running smoothly. They help with course union organizing, student appeals, dissemination of information, political lobbying, and much more.

Publications: Annual *GSU Survival Handbook* available in *Getting There* handbook. The GSU sends out a weekly e-mail digest announcing workshops, deadlines, political events, and the like. All graduate students should receive it from the GSU Council Rep. If you are not receiving it, or would like to make a submission, see the GSU Web site for details or contact announce.gsu@utoronto.ca.

CUPE 3902 (Canadian Union of Public Employees) represents graduate students who hold a teaching assistantship. The office is at 180 Bloor Street West, Room 902. (416) 593-7057, www.cupe3902.org.

HART HOUSE

Telephoner (416) 978-2452
Fax: (416) 978-8387
Web: www.harthouse.utoronto.ca

Hart House is Your Student Centre
Graduate students, Hart House is here for you to escape to, explore, and experience the social side of university life! While Hart House does boast a wide range of programs and activities, you don't need to be a club member or a gym rat to have a good reason to visit.

Feeling hungry? Grab a bite to eat in the Arbor Room. Need to study? Find a quiet corner of the Library. Want to hear some new music? Tune in to Hart House's Record Room. Feeling a little sleepy? Have a catnap on one of the cozy sofas which line the halls. Looking for a place to shoot some pool? Rack them up on our free pool table. No matter who you are or where your interests lie, Hart House has something for you!

At Hart House, you'll also find a full-service athletics facility, a historic theatre, and thousands of renowned events every year - workshops, concerts, films, and more. Check out the Web site or weekly event column in The Varsity.

Whether you're interested in art, music, debates, photography, fitness, film, drama, chess, bridge, or scuba diving, you can find it at Hart House.

If you want to be more involved, Hart House operates 10 standing committees and 22 clubs. You can join most clubs and committees at any time of the year - just choose the type of activity you're interested in and attend the next meeting or event.

For more information on what Hart House offers, visit the Web site.

HEALTH SERVICE

Health Service Clinic
Koffler Student Services Centre
214 College Street, Second floor
Toronto, Ontario
M5T 229

Telephone: (416) 978-8030
E-mail: health.services@utoronto.ca
Web: www.utoronto.ca/health
Hours: Mon, Thurs, Fri:
9:00 a.m. to 5:00 p.m.
(4:30 p.m. in July and August)
Tues, Wed:
9:00 a.m. to 7:00 p.m.
(6:30 p.m. in July and August)

Health Service offers U of T students the same services as a family doctor's office and more. We provide confidential, student-centred health care including comprehensive medical care, travel education, immunization, counselling and referrals. The multi-disciplinary team includes family physicians, registered nurses, a health promotion nurse, peer health educators, a community health coordinator, and a lab technician.

Comprehensive sexual health care and counselling is available. Contraceptive products can be purchased at a reduced cost when prescribed by a Health Service physician. Emergency contraception, pregnancy testing, pregnancy support as well as sexually transmitted infection testing, treatment, and education is also available. When you visit Health Service, bring your OHIP or UHIP card, or health card from another province, and your student card.

Call to book an appointment. If you need to be seen more urgently, there is also a drop-in option.

Psychiatric Service
Koffler Student Services Centre
214 College Street, Main floor
Toronto, Ontario
M5T 229

Telephone: (416) 978-8070
Web: www.utoronto.ca/psychservices
Hours: Mon, Wed to Fri:
9:00 a.m. to 5:00 p.m.
(4:30 p.m. in July and August)
Tues:
9:00 a.m. to 7:00 p.m.
(6:30 p.m. in July and August)

The Psychiatric Service offers assessment and/or treatment for students with emotional and psychological concerns such as anxiety, depression, obsessions and compulsions, phobias, relationship difficulties, eating and body image issues, attention and/or concentration problems, problems with sleep, and substance abuse.

Clinical staff possess expertise in a wide variety of therapeutic methods including individual, couple and group psychotherapy. This is a confidential service available to all full and part-time students who have paid their incidental fees. Services are fully covered by OHIP, other provincial insurance plans or the University Health Insurance Plan (UHIP).

No referral is necessary. Call or drop-in to schedule an appointment.

HOUSING

University Student Housing

St. George Campus
University of Toronto Student Housing Service
Koffler Student Services Centre
214 College Street
Toronto, Ontario
M5T 229

Telephone: (416) 978-8045
Fax: (416) 978-1616
E-mail: housing.services@utoronto.ca
Web: www.housing.utoronto.ca

University of Toronto Student Family Housing
Koffler Student Services Centre
214 College Street
Toronto, Ontario
M5T 229

Telephone: (416) 978-8049
Fax: (416) 946-5466
E-mail: family.housing@utoronto.ca
Web: www.housing.utoronto.ca

Mississauga Campus
Residence Centre
3359 Mississauga Road
Mississauga, Ontario
L5L 1C6
Telephone: (905) 828-5286, (905) 828-5342
Fax (905) 828-5473
E-mail: resdesk@utm.utoronto.ca,
gdykeman@utm.utoronto.ca
Web: www.utm.utoronto.ca/residence

Scarborough Campus
Student Housing and Residence Life
1265 Military Trail
Scarborough, Ontario
M1C 1A4
Telephone: (416) 287-7365
Fax: (416) 287-7667
E-mail: residences-office@scar.utoronto.ca
Web: www.scar.utoronto.ca/~residence/

The University of Toronto Student Housing Service in the Koffler Student Services Centre serves as a year-round source of up-to-date off-campus housing and residence information as well as other information to assist students in locating and arranging suitable housing.

On-Campus Single Student Residences
There are a number of residences for single graduate students at U of T. In addition, there are a number of independently-owned residences located near the st. George campus that house U of T students. Every residence has its own admission office and application procedure. If you are interested in living in a residence, contact directly the office of each residence of interest to inquire about its specific application process. Because demand for residence space is high, it is important to *apply early - if possible, before you are admitted to U of T.* To increase your chances of receiving an offer, it is wise to apply to as many residences as you are eligible. For more details, visit the Student Housing Web site, www.housing.utoronto.ca.

Student Family Housing
Family housing is available in 713 apartments on the St. George campus and in 84 apartments on the Mississauga campus. Priority for these unfurnished apartments is given to students with a family. The term “family” refers to

students residing with their dependent children and to childless couples in a permanent relationship.

While many students can be housed within one to two years of their application, this is only an average and depends on many variables, the most important of which is the availability of vacant apartments in any given month. It is advisable to apply as soon as you are seriously considering attending the University - if possible *before being given an offer of admission to the University.* For more information or to apply, contact the Student Family Housing offices or visit their Web site.

Off-Campus Housing

The Student Housing Service maintains a registry of available off-campus housing advertised by private landlords, and by students seeking others to share accommodation. The registry of housing ads is available to students on the Web as well as in the housing offices on all three campuses. Students search the ads in the registry as they would the classified section of a newspaper, and make appointments to view potential units. Students coming to Toronto from afar should arrange to stay in temporary housing while conducting their housing search. The Student Housing Service will provide a list of temporary accommodation on request.

Housing in Toronto is usually advertised four to six weeks in advance of the date the unit becomes available for occupancy. It generally takes one to three weeks for a student to locate suitable accommodation, depending on the type of housing desired and the student's budget. For the fall and winter sessions, some students rent their long-term housing from August 1 or October 1, avoiding the September 1 occupancy date (which is popular with students at most post-secondary educational institutions in the city). At the Student Housing Service, the free use of phones is available to students contacting landlords. Since accommodation listed is not inspected, the quality cannot be estimated or guaranteed. Therefore it is very important for students to meet with the landlord and inspect the premises before entering into any agreement.

Cost of Student Housing—Residence, Family Housing and Off Campus

As a guideline, for the 2004/2005 school session, the cost of residence with a full meal plan was approximately $6,800 to $1 0,000 for the eight-month academic session. Modified meal plans are available in some residences. The cost of a shared apartment-style residence, providing cooking facilities but no meal plan, was approximately $4,800 to $5,400. However, please note that residence fees for the upcoming school year are expected to rise. After paying an initial deposit, the balance of fees is usually paid in two instalments at the beginning of each of the four-month fall and spring sessions. Residence fees are paid monthly at Graduate House.

As of August 1, 2004, rent for the bachelor, one-bedroom, and two-bedroom units located in the Student Family Housing complex located at 30/35 Charles Street West range from approximately $558 to $914 depending on the size of the unit, and is payable monthly. These rents will rise by at least 1.5% in August 2005.

Students looking for rooms in shared houses or apartments off-campus should expect to budget $350 to $600 per month. A student requiring a private apartment off campus usually pays $500 to $750, $550 to $900, or $800 to $1,300 for a bachelor, one-bedroom, or two-bedroom unit respectively. A three-bedroom house or apartment will usually rent for $1,200 to $1,700.

Graduate House

60 Harbord Street
Toronto, Ontario
M5S 3L1

Telephone: (416) 946-8888
Fax: (416) 946-8887
E-mail: information.gradhouse@utoronto.ca
admissions.gradhouse@utoronto.ca
Web: www.sgs.utoronto.ca/gradhouse

Standing as the western gateway to the University of Toronto on the north-east corner of Harbord Street and Spadina Avenue, Graduate House is home to both full-time students from the School of Graduate Studies and full-time students from six professional faculties (Dentistry, Law, Medicine, Nursing, OISE/UT, and Pharmacy). In administering Graduate House, the School of Graduate Studies is committed to providing its residents with an affordable and supportive environment conducive to both the pursuit of academic excellence and a fulfilling life experience.

Graduate House houses 437 students in three-bedroom and four-bedroom fully furnished shared suites. Most of the bedrooms within the suites are singles, though there are a few shared double bedrooms, as well as a few premium single bedrooms. Each suite also contains two or three bathrooms, a kitchen, and a living area. Residents are expected to do their

own cooking and are responsible for cleaning their own suites.

Throughout the building are numerous common areas, each equipped with wireless networking. Graduate House also offers its residents two TV areas and a range of clubs and social activities. Graduate House is a completely non-smoking environment.

Occupancy fees for 2004/2005 are $599 per month per person for a single bedroom, $456 per month per person for a shared double bedroom, and $668 per month for a premium single bedroom. Occupancy fees include heat, light, water, air-conditioning, and high-speed internet access. All occupancy fees are subject to possible change as of May 1 each year.

For more information and application forms, e-mail admissions.gradhouse@utoronto.ca or visit our Web site at www.sgs.utoronto.ca/gradhouse.

Massey College

4 Devonshire Place
Toronto, Ontario
M5S 2E1

Telephone: (416) 978-2891
Fax: (416) 971-3032
E-mail: g.sharpe@utoronto.ca
Web: www.utoronto.ca/massey/

Massey College is the only independent graduate college residence associated with the University of Toronto. It is interdisciplinary and provides a focus for graduate work and a congenial intellectual environment for the exchange of opinions and ideas. Its graduate members work in various branches of the humanities, sciences, and professions, and come from all parts of Canada and around the world. The College's superb facilities are located centrally and are open twelve months a year. All rooms are single, fully furnished, and consist of a bedroom and adjacent private study. A meal plan is provided.

All applications must be addressed to the College Registrar and must be completed and received by May 1. Admission is based on academic achievement, discipline and level of study, extracurricular activities, and general experience. Consideration is given to student representation from all academic disciplines and from professional programs such as law, medicine, and education. The College elects both resident and non-resident fellows.

Contact the College Registrar at (416) 978-2891 for further details.

INTERNATIONAL STUDENT CENTRE (ISC)

33 St. George Street
Toronto, Ontario
M5S 2E3

Telephone: (416) 978-2564
fax: (416) 978-4090
E-mail: isc.information@utoronto.ca
Web: www.isc.utoronto.ca/

The International Student Centre (ISC) promotes and supports international education and offers services, programs, and facilities for international students, students with international and/or intercultural interests, and students looking for education and work opportunities abroad. Located on the St. George campus, the ISC welcomes *all* students to use its lounges and meeting rooms on a casual basis to relax, study, have lunch, or meet with friends. A unique student-run vegetarian cafe operates during the school year. Specific programs and services offered at ISC include advice and assistance on immigration and health insurance concerns, a newsletter, electronic listserv, English conversation classes, personal counselling, a buddy program, trips and activities, and work/study information for Canadians travelling abroad.

LIBRARY SYSTEM

Telephone: (416) 978-8450
Fax: (416) 978-7653
E-mail: utweb@library.utoronto.ca
Web: www.library.utoronto.ca

Researchers have access to over 15 million items in the library collections of the University of Toronto, making this resource the largest in Canada and ranking among the top five academic libraries in North America. The major portion of this collection is divided between the Gerstein Science Information Centre and the John P. Robarts Library for humanities and social science materials. As well, there is the Thomas Fisher Rare Book Library containing extensive special collections, the Engineering and Computer Science Library, the OISE/UT Library (Education), the Pharmacy Library, and the Earth Sciences Library. A smaller portion of the collection is housed in over 30 libraries across the campus. Generally, these are in affiliated college libraries or in specialized collections representing such fields as law, physics, architecture, and dentistry.

Study space is provided in many of the libraries, and individual carrels, desks, and book lockers are available. The Robarts Library provides study space 24 hours a day, 5 days a week during the fall and winter sessions.

The library offers a wide variety of sophisticated information retrieval services. The on-line catalogue system provides access to the library's print and electronic collections and to the catalogues of other major libraries throughout the world. The library provides access to over 37,000 electronic journals and over 30,000 electronic books. On-line searching of over 500 index and abstract databases is available through a variety of local and commercial systems.

Information Commons

The Scotiabank Information Commons, located on the first floor of the Robarts Library, is a focal point at the University for electronic information access. Among many services, it offers a design studio and new media suites. A help desk supports Internet and electronic mail access for all faculty, staff, and students. Web casting and video conferencing services are also available.

Resource Centre for Academic Technology (RCAT)

RCAT, located on the fourth floor of the Robarts Library, facilitates the development of effective teaching, learning, and research strategies based on emerging computer technologies. It supports individuals with special needs through the advancement of accessible information technologies.

OMBUDSPERSON

Office of the University Ombudsperson
Suite 161, 222 College Street
Toronto, Ontario
M5T 3J1

Telephone: (416) 978-4874
Fax: (416) 978-3439
E-mail: ombuds.person@utoronto.ca
Web: www.utoronto.ca/ombudsperson

As part of the University's commitment to ensuring that the rights of its individual members are protected, the University Ombudsperson investigates complaints from any member of the University not handled through regular University channels. The Ombudsperson offers advice and assistance and can recommend changes in academic or administrative procedures where this seems justified. In handling a complaint, the Ombudsperson has access to all relevant files and information and to all appropriate University officials. The Ombudsperson handles all matters in strict confidence, unless the individual involved approves otherwise. The Ombudsperson is independent of all administrative structures of the University and is accountable only to the Governing Council.

The Ombudsperson is available by appointment at all three U of T campuses. Please telephone or e-mail to schedule an appointment.

SEXUAL HARASSMENT EDUCATION, COUNSELLING, AND COMPLAINT OFFICE

Third Floor, 40 Sussex Avenue
Toronto, Ontario
M5S 1J7

Telephone: (416) 978-3908
Fax: (416) 971-2289
Web: www.utoronto.ca/sho

The Sexual Harassment Policy deals with harassment based on sex and sexual orientation. The Sexual Harassment Officer provides advice, education, and information to the University community; counsels all parties to complaints; and mediates complaints under the formal complaint procedure which is confidential.

The office is on the St. George campus; however, the Sexual Harassment Officer visits the U of T at Mississauga and U of T at Scarborough campuses on a regular basis. Call to schedule an appointment; arrangements may be made to meet on your campus.

6

Course Codes

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

Not every course listed in the calendar will be given in this academic year. Consult the graduate unit for course availability.

Glossary of Course Codes

Primary codes denote courses where one academic unit has responsibility for offering the course.

Joint codes denote courses where two or more graduate units participate to offer the course.

Primary Course Codes

AEC Adult Ed. & Counselling Psych.
AER Aerospace Sci. & Eng.
AGE Human Dev., Life Course & Aging
ANT Anthropology
ARC Architecture, Landscape, and Design
ASI Asia-Pacific Studies
AST Astronomy and Astrophysics
BCH Biochemistry
BKS Book History & Print Culture
BME Biomedical Eng.
BOT Botany
BTC Biotechnology
C&T McLuhan Program in Culture & Tech.
CHE Chemical Eng. & Appl. Chem.
CHL Public Health Sci.
CHM Chemistry
CIE Comparative, International & Dev. Ed.
CIV Civil Eng.
CLA Classics
COL Comparative Lit.
CRI Criminology
csc Computer Sci.
CTL Curriculum, Teaching & Learning
DEN Dentistry
DMI Design and Manufacturing, Advanced
DRA Drama
EAS East Asian Studies
ECE Electrical & Computer Eng.
ECO Economics
EDE Environmental Eng.
ENG English
EXS Exercise Sci.
FAH History of Art
FEC Financial Economics
FIS Information Studies
FOR Forestry
FRE French Lang. & Lit.
GER Germanic Langs. & Lits.
GGR Geography
GLG Geology
HAD Health Policy, Management & Evaluation
HDP Human Dev. & Appl. Psych.
HIS History
HPS Hist. & Phil, of Sci. & Tech.
HSR Health Services & Policy Research
IES Environmental Studies
IMM Immunology
IRE Industrial Relations

ITA Italian Studies
JCV Cardiovascular Sci.
JDS Development Sci.
JPW Women's Studies
JTB Proteomics & Bioinformatics
JTH Ethnic & Pluralism Studies
KMD Knowledge Media Design
LAW Law
LIN Linguistics
LMP Laboratory Medicine & Pathobiology
MAT Mathematics
MBP Medical Biophysics
MGT Management
MIE Mechanical & Industrial Eng.
MMG Molecular & Medical Genetics
MMS Materials Sci. & Eng.
MPL Microbiology
MSA Spatial Analysis
MSC Medical Sci.
MSE Materials Sci. & Eng. undergraduate 500 courses
MSL Museum Studies
MST Medieval Studies
MUS Music
NMC Near & Mid. Eastern Civilizations
NFS Nutritional Sci.
NUR Nursing Sci.
OCT Occupational Therapy
PAS Addiction Studies
PCL Pharmacology
PHL Philosophy
PHM Pharmaceutical Sci.
PHT Physical Therapy
PHY Physics
PLA Planning
POL Political Sci.
PSL Physiology
PSY Psychology
REH Rehabilitation Sci.
RLG Religion
RUS Russian & East European Studies
SAS South Asian Studies
SEM Semiotics
SES Sociology & Equity Studies in Ed.
SLA Slavic Langs. & Lits.
SLP Speech-Language Pathology
SOC Sociology
SPA Spanish
STA Statistics
SWK Social Work
TPS Theory & Policy Studies in Ed.
URD Urban Design
zoo Zoology

Joint Course Codes

JAA Anthropology/South Asian Studies
JAB Anthropology/Botany
JAC Anthropology/Culture & Technology
JAH Anthropology/History
JAI Classics/History of Art/Near & Mid. Eastern Civilizations
JAL Anthropology/Linguistics
JAM Anthropology/Materials Sci. & Eng.
JAP Anthropology/Psychology
JAR Anthropology/Religion
JAS Anthropology/Sociology
JAZ Anthropology/Zoology
JBB Biochemistry/Medical Biophysics/ Molecular & Medical Genetics
JBE Botany/Environmental Studies
JBF Botany/Forestry
JBI Biochemistry/Immunology
JBL Biochemistry/Laboratory Medicine & Pathobiology
JBM Botany/Microbiology
JBP Management/Political Sci.
JBZ Biochemistry/Botany/Zoology
JCA Anthropology/Russian & East European Studies
JCB Biomedical Engineering/Chemical Eng. & Appl. Chem.
JCC Chemical Eng. & Appl. Chem./Civil Eng.
JCF Chemical Eng. & Appl. Chem./Forestry
JCH Chemical Eng. & Appl. Chem./Chemistry
JCI Chemical Eng. & Appl. Chem./Mechanical & Industrial Eng.
JCL Laboratory Medicine & Pathobiology/ Medical Sci.
JCM Chemical Eng. & Appl. Chem./Public Health Sci.
JCN Civil Eng./Environmental Studies
JCP Classics/Hist. & Phil. of Sci. & Tech.
JCT Curriculum, Teaching & Learning/Theory & Policy Studies in Ed.
JDA Anthropology/Dentistry
JDB Botany/Molecular & Medical Genetics/ Zoology
JDE Graduate Engineering Departments
JDS Human Dev. & Appl. Psych./Psychology
JEB Biomedical Eng./Elect. & Computer Eng.
JEC Environmental Studies/Public Health Sci.
JEH English/History
JEI Environmental Studies/Mechanical & Industrial Eng.
JEL Electrical & Computer Eng./Mechanical & Industrial Eng.
JEM Electrical & Computer Eng./Materials Sci. & Eng.
JEN Chemical Eng. & Appl. Chem./Materials Sci. & Eng./Mechanical & Industrial Eng.
JEP English/Philosophy
JER English/Religion
JES East Asian/South Asian Studies

JFC Comparative Lit./French Lang. & Lit.
JFE Engineering/Forestry
JFG Forestry/Geography
JFK Medical Sci./Pharmaceutical Sci./ Pharmacology
JFS Forestry/Social Work
JGC Germanic Langs. & Lits./Comparative Lit.
JGE Environmental Studies/Geography
JGN Environmental Studies/Geology
JGP Geology/Physics
JHA History/South Asian Studies
JHC Curriculum, Teaching & Learning/Human Dev. & Appl. Psych.
JHL Comparative Lit./History
JHM Health Policy, Management & Evaluation/ Medical Sci.
JHP History/Political Sci.
JIC Comparative Lit./Italian Studies
JIL Italian/Linguistics
JIP Economics/Near & Middle Eastern Civilizations
JLA Comparative Lit./East Asian Studies
JLE Comparative Lit/English
JLM Linguistics/Mathematics
JLP Linguistics/Psychology
JMA Civil Eng./Mechanical & Industrial Eng.
JMC East Asian/History/Political Sci.
JME Education/McLuhan Program
JMH Hist. & Phil. of Sci. & Tech./Medieval Studies
JMI Italian Studies/Music
JMM Biomedical Eng ./Mechanical & Industrial Eng.
JMP Mathematics/Philosophy
JMT Classics/Medieval Studies
JMY Chemistry/Materials Sci. & Eng.
JMZ Materials Sci. & Eng./Mechanical & Industrial Eng.
JNC Chemical Eng. & Appl. Chem./ Environmental Studies
JNH Nursing Sci./Public Health Sci.
JNP Environmental Studies/Pharmaceutical Sci ./Pharmacology
JNR Biochemistry/Pharmacology/Physiology
JNS Anatomy & Cell Biology/Psychology
JPA Anthropology/Physics
JPB Biomedical Eng./Physiology
JPC Public Health Sci./Political Sci.
JPD Political Sci./Sociology
JPE Economics/Political Sci.
JPG Geography/Planning
JPH Hist. & Phil. of Sci. & Tech./Philosophy
JPI Immunology/Laboratory Medicine & Pathobiology
JPJ Law/Political Sci.
JPL Law/Philosophy
JPM Medical Sci./Pharmacology
JPN Environmental Studies/Physics
JPP Philosophy/Political Sci.
JPR Physiology/Zoology
JPS Astronomy/Physics
JPT Education/Philosophy
JPV Environmental Studies/Political Sci.
JPX Education/Nursing Sci./Psychology/ Social Work
JPY Pharmaceutical Sci./Pharmacology
JPZ Microbiology/Zoology
JRL Linguistics/Romance Langs.
JRX Chemistry/Pharmaceutical Sci.
JSA Anthropology/Sociology & Equity Studies in Ed.
JSB Biomedical Eng./Public Health Sci.
JSC Criminology/Social Work
JSE Environmental Studies/Sociology
JSL Law/Social Work
JSP Philosophy/Psychology/Sociology
JSS Biomedical Communications/Sheridan
JST Computer Sci./Statistics
JTC Chemical Eng. & Appl. Chem./Materials Sci. & Eng.
JTE Curriculum, Teaching & Learning/ Sociology & Equity Studies in Ed.
JUS Laboratory Medicine & Pathobiology/ Medical Biophysics
JVP Environmental Studies/Philosophy
JXP Exercise Sci./Public Health Sci.
JYG Molecular & Medical Genetics/ Pharmacology/Physiology
JZB Botany/Zoology
JZP Psychology/Zoology

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:

1 Fall Session (September to December and designated YEARS)
2 Winter Session (January to May and designated YEAR 1)
3 Summer Session (May to August and designated YEAR 5).

Alphabetical Character Following Course Number

Y Full Course
H Half-Course

Y and H courses may be offered in either the Fall or Winter Sessions or spread over both. Please consult departmental timetables for details.

° Continuous course. Indicator used to identify specific 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.

(CR/NCR) following course title indicates Credit/no Credit

7

Graduate Faculty

Full Members and Members Emeriti

There are three categories of graduate faculty. Section 7 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 - see Section 8.

For more details about each faculty member's appointment category, degrees, honours, and chairs held, consult the graduate unit entry in Section 8 of the SGS Calendar. information is also available on the SGS Web site (www.sgs.utoronto.ca).

P. Aarabi/Electrical & Computer Engineering
J. P. D. Abbatt/Chemistry
M. M. S. Abdelhaleem/Laboratory Medicine & Pathobiology
A. H. Abdelmessih/Mechanical & Industrial Engineering
T. Abdelrahman/Electrical & Computer Engineering
B.. Abdulhai/Civil Engineering
S. M. Abel/Medical Science
M. G. AbouHaidar/Botany
R. G. Abraham/Astronomy & Astrophysics
R. S. Abramovitch/Psychology
P. A. Abrams/Zoology
L. J. Abray/History
R. D. Accinelli/History
S. S. Acker/Sociology & Equity Studies in Education
A. L. Ackerman/English
E. J. Acosta/Chemical Engineering & Applied Chemistry
T. H. Adamowski/English
8. J. Adams/Civil Engineering
S. L. Adamson/Medical Science
J. Addington/Medical Science
K. A. Adeli/Laboratory Medicine & Pathobiology
E. Adler/Political Science
D. Affonso/Nursing Science
A. F. Agrawal/Zoology
A. Agur/Medical Science
D. Ainslie/Philosophy
P. L. Aird/Environmental Studies
P. Airhart/Religion
J. S. Aitchison/Electrical & Computer Engineering
J. L. Aitken/Curriculum, Teaching & Learning
V. A. Aivazian/Economics
S. C, Akbari/English
M. A. Akcoglu/Mathematics
V. Aksan/Near & Middle Eastern Civilizations
C. Alain/Psychology
G. A. Alderson-Smith/Anthropology
J. Allard/Medical Science
D. G. Allen/Chemical Engineering & Applied Chemistry
D. L. Allen/Mechanical & Industrial Engineering
D. P. Allen/Philosophy
J. P. Allen/Curriculum, Teaching & Learning
P. R. Allen/English
K. R. Allison/Public Health Sciences
T. M. Alloway/Psychology
B. Alman/Medical Science
R. F. Almgren/Mathematics
V. Ambros/Slavic
T. L. Amburgey/Management
J. H. Amermic/Management
C. G. Amrhein/Geography
A. K. Anderson/Psychology
A. T. Anderson/Curriculum, Teaching & Learning
C. Anderson/History of Art

G. Anderson/Health Policy, Management & Evaluation
G. H. Anderson/Nutritional Sciences
G. J. Anderson/Economics
G. M. Anderson/Geology
J. B. Anderson/Botany
N. D. Anderson/Psychology
S. Anderson/Theory & Policy Studies in Education
M. C. B. Andrade/Zoology
E. G. Andrew/Political Science
B. J. Andrews/Molecular & Medical Genetics
D. F. Andrew/Statistics
G. J. Andrews/Nursing Science
K. Andrews/History of Art
R. C. Andrews/Civil Engineering
I. Andrulis/Molecular & Medical Genetics
J. Angus/Nursng Science
H. M. Annis/Public Health Sciences
E. M. Antone/Adur Education & Counselling Psychology
R. A. Nawar/Biochemistry
M. C. Archer/Nutritional Sciences
S. A. Argyropoulos/Materials Science & Engineering
E. K. Annatage/Drama
L. D . Amstrong/Medieval Studies
M. L. Arnold/Human Development & Applied Psychology
S. Arntzen/East Asian Studies
J . Aronson/Pubiic Health Sciences
A. J. Arrowood/Psychology
C. S. Arrowsmith/Medical Biophysics
H. M. Arthur/Nursing Science
J. G. Arthur/Mathematics
P. Artmowicz/Astronomy & Astrophysics
S. L. Asa/Laboratory Medicine & Pathobiology
F. J. Asals/English
N. Ashgriz/Mechanical & Industrial Engineering
M. J. Ashley/Public Health Sciences
S. Aster/History
J. H. Astington/English
J. W. Astington/Human Development & Applied Psychology
L. R. Atkinson/Psychology
L. Attisano/Biochemistty
H. L. Atwood/Physiology
I. Aubert/Laboratory Medicine & Pathobiology
J. E. Aubin/Molecular & Medical Genetics
J. Audet/Biomedical Engineering
K. T. Aust/Materials Science & Engineering
E. W. Auster/Information Studies
H. Auster/English
I. Averbakh/Management
G. Averill/Music
A. G. Awad/Medical Science
A. A. Axelrad/Medical Biophysics
F. Bacchus/Computer Science
P. H. Backx/Medical Science
R. F. Badgley/Medical Science
E. M. Badley/Public Health Sciences
R. M. Baecker/Computer Science
E. J. Baek/East Asian Studies
M. Bagby/Medical Science
B. S. Baigrie/History & Philosophy of Science & Technology
D. C. Baiiey/Physics
R. C. Bailey/Physics
A. D. Baines/Laboratory Medicine & Pathobiology
W. D. Baines/Mechanical & Industrial Engineering
G. P. Baird/Architecture, Landscape, & Design
J. D. Baird/English
A. J. Baker/Zoology
A. J. Baker/Medical Science
G. Baker/Heath Policy, Management & Evaluation
M. A. Baker/Medical Science
R. L. Baker/Zoology
R. R. Baker/Biochemistry
W. M. Baker/Economics
O. Bakich/Slavic
R. Balakrishnan/Computer Science
J . J . Balatinecz/Forestry
A. B. Balcioglu/Mechanical & Industrial Engineering
B. Baldus/Smiology
S. T. Balke/Chemical Engineering & Applied Chemistry
P. W. Ball/Botany
P. J. Ballantyne/Pharmaceutical Sciences
K. G. Balmain/EIectrical & Computer Engineering
S. Bancheri/Italian
E. B. Banning/Anthropology
B. Bapat/Laboratory Medicine & Pathobiology
R. Baraheni/Comparative Literature
H. E. Barbaree/Medical Science
E. J. Barbeau/Mathematics
B. H. Barber/Immunology
D. L. Barber/Medical Biophysics
J. Barber/Social Work
B. L. Bardakjian/Electrical & Computer Engineering
D. Barham/chemical Engineering & Applied Chemistry
J. Barker/Political Science
O. Bar-Natan/Mathematics
C. J. Banes/Slavic
T. D. Barnes/Classics
R. Barney/Classics
J. M. Barnsley/Health Policy, Management & Evaluation
O. Baron/Management
C. L. Barr/Medical Science
F. M. Barrett/Zoology
S. C. H. Barrel/Botany
L. R. Bartel/Music
K. R. Bartlett/History

S. Baruchel/Medical Science
V. Barzda/Physics
N. Basciaheory & Policy Studies in Education
S. Bashevkin/Political Science
A. S. BaSSett/Medical Science
J. N. Bassili/Psychology
D. J. Bast/Laboratory Medicine & Pathobiology
R. A. Batey/Chemistry
J. A. C. Baum/Management
W. F. Bawden/Civil Engineering
D. P. Bazett-Jones/Biochemistry
D. W. Beach/Music
C. E. Bear/Physiology
G. H. Beaton/Nutritional Sciences
J. M. Beattie/Criminology
M. Beattie/Curriculum, Teaching & Learning
C. M. Beck/Curriculum, Teaching & Learning
J. C. Beck/Mechanical & Industrial Engineering
R. L. Beck/Classics
A. J. Becker/Molecular & Medical Genetics
J. Beckwith/Music
C. H. Bedford/Slavic
C. Beghtol/Information Studies
D. R. Begun/Anthropology
D. Behrens/Sociology
R. S. Beiner/Political Science
M. Beiser/Medical Science
J. H. Beitchman/Public Health Sciences
N. Belanger/Sociology & Equity Studies in Education
J . Belik/Medical Science
R. S. Bell/Medical Science
D. F. Bellamy/Social Work
D. D. Belsham/Physiology
F. Ben Amara/Mechanical & Industrial Engineering
R. Ben Mrad/Mechanical & Industrial Engineering
S. R. Benatar/Public Health Sciences
S. Benchimol/Medical Biophysics
L. Bencze/Curriculum, Teaching & Learning
Y. Ben-David/Medical Biophysics
R. Bendayan/Pharmaceutical Sciences
M. P. Bendeck/Laboratory Medicine & Pathobiology
D. E. Bender/History
G . Bendzsa/Materials Science & Engineering
B. Benhabib/Mechanical & Industrial Engineering
H. D. Benjamin/Economics
B. Bennett/Curriculum, Teaching & Learning
A. Bennick/Dentistry
P. Benson/Law
G. E. Bentley (Jr)/English
E. C. Benz/Civil Engineering
c. Bereiter/Human Development & Applied Psychology
K. Berg/Physical Therapy
C. C. Berger/History
S. A. Berger/Immunoiogy
C. Bergeron/Laboratory Medicine & Pathobiology
N. L. Berinstein/Immunotogy
B. W. Berleth/Botany
O. Berman/Management
W. C. Berman/History
A. Bemstein/Molecular & Medical Genetics
R. A. Berry/Economics
M. Bersohn/Chemistry
C. L. Bertrand-Jenning/French
A. J. Bewell/English
P. M. Bhatt/French
B. R. Bhavnani/Medical Science
K. Bickmore/Curriculum, Teaching & Learning
A. J. Biemiller (Jr)/Human Development & Applied Psychology
A. Bierman/Nursing Science
E. BierStone/Mathematics
A. Bilas/Electrical & Computer Engineering
I. Binder/Mathematics
R. I. Binnick/Linguistics
R. M. Bird/Management
J. Birgeneau/Physics
P. C. Birkemoe/Civil Engineering
R. Birla/History
A. E. Birn/Public Health Sciences
E. Birnbaum/Near & Middle Eastem Civilizations
R. E. BiShop/Laboratory Medicine & Pathobiology
G. Bisztray/Slavic
M. Bjerknes/Medical Biophysics
D. L. BIack/Philosophy
S. E. Black/Medical Science
J. Blackmore/Spanish
M. E. Blackstein/Medical Science
F. Blake/Electrical & Computer Engineering
T. J. Blake/Forestry
P. H. Blanchard/History
R. Blanchard/Medical Science
J. S. Bland/Mathematics
K. R. BIankstein/Psychology
B. J. Blencowe/Molecular & Medical Genetics
J. R. Blickstead/Sociology
J. M. BliSS/History
T. Bloom/Mathematics
M. BIute/Sociology
A. Bocking/Medical Science
J. P. Boddy/Anthropology
Y. M. Bodemann/Sociology
D. G. Bogdan/Theory & Policy Studies in Education
R. Bogert/Slavic
J. N. Boggs/Laboratory Medicine & Pathobiology
A. L. Bognar/Molecular & Medical Genetics
M. C. Bogo/Social Work
E. R. Bogoch/Medical Science
B. Bolduc/French
M. Boler/Theory & Policy Studies in Education
C. T. Bolton/Astronomy & Astrophysics

C. Bombardier/Health Policy, Management & Evaluation
J. F. Bonacci/Civil Engineering
J. R. Bond/Theoretical Astrophysics
S. Bondy/Public Health Sciences
R. .R. Bonert/Electrical & Computer Engineering
A. Bonner/Computer Science
D. G. Bpoocock/Chemical Engineering & Applied Chemistry
H. Book/Medical Science
C. Boone/Molecular & Medical Genetics
R. Boonstra/Zoology
D. W. Booth/Curriculum, Teaching & Learning
L. D. Booth/Management
S. F. Borins/Management
A. B. Borodin/Computer Science
K. A. Boschen/Rehabilitation Science
R. Bothwell/History
P. Bouissac/French
G. L. Boulianne/Molecular & Medical Genetics
P. I. Boulton/Electrical & Computer Engineering
L. S. Bourne/Geography
N. T. Boursier/French
C. Boutilier/Computer Science
B. M. Bowen/Pharmaceutical Sciences
W. R. Bowen/Music
D. R. Boyd/Theory & Policy Studies in Education
M. Boyd/Sociology
N. F. Boyd/Medical Science
J. M. Boyle/Philosophy
L. Boyntonl/Biomedical Engineering
D. T. Bradley/Medical Science
D. Branch/Medical Science
L. Brandt/Economics
B. Branfireun/Geography
A. Braun/Political Science
D. J. Brean/Management
R. A. Bremner/Medical Science
J. M. Brenan/Geology
D. Brenner/Statistics
T. Bressmann/Speech-Language Pathology
M. M. Breton/social Work
R. Breton/Socioiogy
M. C. Bret/Curriculum Teaching & Learning
J. A. Brill/Molecular & Medical Genetics
R. G. Bristow/Medical Biophysics
J . N . Britton/Geography
M. Bronskill/Medical Biophysics
A. G. Brook/Chemistry
T. J. Brook/History
D. Brooks/Physical Therapy
D. R. Brooks/Zoology
L. J. Brooks/Management
M. Broucke/Electrical Computer Engineering
D. M. Broussard/Medical Science
A. M. Brousseau/French
S. A. Broverman/Statistics
E. Brown/History
G. M. Brown/Physiology
G. W. Brown/Biochemistry
I. R. Brown/Zoology
J. R. Brown/Philosophy
M. Brown/Molecular & Medical Genetics
R. C. Brown/History
R. M. Brown/English
S. D. Brown/Electrical & Computer Engineering
T. J. Brown/Physiology
V. Brown/Medieval Studies
D. Brownfield/Sociology
J. S. Brownlee/History
P. L. Brubaker/Physiology
A. E. Bruce/Zoology
W. R. Bruce/Nutritional Sciences
P. Bruckmann/English
A. S. Brudner/Law
J. Brumell/Molecular & Medical Genetics
P. W. Brumer/Chemistry
6. G. Bruneau/Molecular & Medical Genetics
J. Brunnee/Law
L. J. Brunner/Statistics
J. L. Brunton/Medical Science
C. F. Bruun/Classics
R. B. Bryan/Forestry
J. M. Bryant/Religion
R. J. Brym/Sociology
M. Buchwald/Molecular & Medical Genetics
R. Buchweitz/Mathematics
L. T. Buck/Zoology
A Büdde/Comparative Literature
B.B. Budurowy/Slavic
F. J. R. Buick/Exercise Sciences
S. B. BuII/Public Health Sciences
M. F. Bunce/Geography
J. S. Burgess/Classics
R. C. Burgess/Dentistry
J. F. Burke/Spanish
W. M. Burnham/Pharmacology
G. E. Burns/Chemistry
P. Burns/Medical Biophysics
L. Burrows/Medical Science
B. Burstow/Adult Education & Counselling Psychology
E. N. Burstynsky/Linguistics
F. D. Burton/Anthropology
M. Bussman/Mechanical & Industrial Engineering
U. Busto/Pharmaceutical Sciences
D. G. Butler/Zoology
P. H. Byer/Civil Engineering

D. R. Calder/Zoology
J. W. Callahan/Biochemistry

W. J. Callahan/History
J. L. Callen/Management
L. M. Calzavara/Public Health Sciences
N. Camerman/Biochemistry
D. R. Cameron/Political Science
E. Cameron/English
L. M. Cameron/Curriculum, Teaching & Learning
D. Campbell/Sociology
E. Campbell/Curriculum, Teaching & Learning
J. B. Campbell/Molecular & Medical Genetics
M. Campbell/Forestry
R. A. Campbell/Religion
J. Canfield/Philosophy
R. Capozzi/Italian
J. H. Carens/Political Science
R. G. Catlberg/Astronomy & Astrophysics
P. L. Carlen/Physiology
T. J. Carleton/Forestry
J. L. Carr/Economics
W. P. Carstens/Anthropology
M. W. Cader/Mechanical & Industrial Engineering
J. P. CaNer/Molecular & Medical Genetics
F. R. Casas/Economics
F. I. Case/French
N. R. Cashman/Medical Biophysics
J. Caskey/History of Art
R. F. Casper/Medical Science
J. P. Caspersen/Forestry
D. Cassidy/Public Health Sciences
P. A. Catton/Medical Science
M. S. Cattral/Medical Science
D. C. Cattran/Medical Science
E. Cazdyn/East Asian Studies
C. E. Chaffey/Chemical Engineering & Applied Chemistry
A. Chakrabartty/Medical Biophysics
A. Chakravartty/History & Philosophy of Science & Technology
T. V. Chalikian/Pharmaceutical Sciences
C. G. Chalin Clark/Public Health Sciences
J. R. G. Challis/Physiology
B. E. Chalmers/Nursing Science
J. W. Chamberlain/Immunology
J. E. Chamberlin/English
C. Chambers/Psychology
D. D. C. Chambers/English
J. K. Chambers/Linguistics
S. Chambers/Political Science
A. Chambon/Social Work
H. S. Chan/Biochemistry
H. S. Chan/Medical Science
K. N. Chan/Music
V. L. Chan/Molecular & Medical Genetics
W. C. W. Chan/Biomedical Engineering
A. Chan Carusone/Electrical & Computer Engineering
S. Chandra/Mechanical & Industrial Engineering
B. Chang/Zoology
D. A. Chant/Zoology
B. Chapman/Law
K. R. Chapman/Exercise Sciences
M. E. Charles/Chemical Engineering & Applied Chemistry
M. P. Charlton/Physiology
A. L. Chasteen/Psychology
T. Chau/Biornedical Engineering
M. Chazan/Anthropology
M. Chech/Computer Science
M. Cheetham/History of Art
C. Chen/Adult Education & Counselling Psychology
J. M. Chen/Geography
R. Chen/Medical Science
H. P. Cheng/Medical Biophysics
Y. L. Cheng/Chemical Engineering & Applied Chemistry
J. M. Cherry/Infomation Studies
J. J. Chew/Anthropology
D. Cheyne/Medical Science
M. H. Chignell/Mechanical & Industrial Engineering
C. C. Chin/History
J. B. Chin/Chemistry
M. L. Chipman/public Health Sciences
H. R. Cho/Physics
M. D. Choi/Mathematics
C. Choo/Information Studies
N. K. Choudhry/Economics
P. Chow/Electrical & Computer Engineering
C. C. Christara/Computer Science
D. Christendat/Botany
C. Christopoulos/civil Engineering
R. Chu/East Asian Studies
K. Y. C. Chun/Physics
S. Churchill/Curriculum, Teaching & Learning
G. S. Ciamaga/Music
L. Cicutto/Nursing Science
D. Clandfield/French
C. Clark/Music
P. Clark/Philosophy
D. Clarke/Medical Science
E. A. Clarke/Public Health Sciences
G. E. Clarke/English
J. T. Clarke/Medical Science
W. H. Clarke/Astronomy & Astrophysics
S. H. Clarkson/Politicai Science
W. L. Cleghom/Mechanical & Industrial Engineering
A. H. Clement/Information Studies
C. M. Clement/Astronomy & Astrophysics
M. J. Clement/Astronomy & Astrophysics
G. P. Clivio/Italian
C. Cloutier-Wojciec/French
W. R. Cluett/Chemical Engineering & Applied Chemistry
A. L. Coates/Physiology

R. S. C. Cobbold/Biomedical Engineering
D. Coburn/Public Health Sciences
I. Cochelin/History
A. Cochrane/Molecular & Medical Genetics
R. W. Cockerill/Health Policy, Management & Evaluation
R. F. Code/Physics
A. Cohen/Immunoiogy
J. Cohen/Public Health Sciences
J. S. Cohen/Economics
M. M. Cohen/Health Policy, Management & Evaluation
N. Cohen/Human Development & Applied Psychology
R. S. Cohen/Curriculum, Teaching & Learning
Z. Cohen/Medical Science
L. M. Colantoni/Spanish
A. Colantonio/Occupational Therapy
A. L. Cole/Adult Education & Counselling Psychology
D. Cole/Laboratory Medicine & Pathobiology
D. Cole/Public Health Sciences
E. Cole/Medical Science
W. G. Cole/Medical Science
J. R. Coleman/Botany
J. G. Coles/Medical Science
J. Colliander/Mathematics
F. Coliins/French
M. P. Collins/Civil Engineering
N. C. Collins/Zoology
R. A. Colins/Molecular & Medical Genetics
R. Comay/Philosophy
C. E. Conle/Curriculum, Teaching & Learning
F. M. Connelly/Curriculum, Teaching & Learning
P. W. Connelly/Laboratory Medicine & Pathobiology
C. Consani/Mathematics
M. P. Consens/Mechanical & Industrial Engineering
D. B. Cook/Political Science
E. Cook/English
R. Cook/History
R. Cook/Law
S. A. Cook/Computer Science
P. A. Cooper/Forestry
N. E. Copeland/Drama
J. H. Corbett/Religion
S. Cordes/Molecular & Medical Genetics
M. H. Corey/Public Health Sciences
P. N. Corey/Public Health Sciences
D. E. Cormack/Chemical Engineering & Applied Chemistry
B. Corman/English
D. G. Corneil/Computer Science
C. M. Corter/Human Development & Applied Psychology
K. S. Corts/Management
J. Cossman/Law
C. Cott/Physical Therapy
G. G. Coupland/Anthropology
D. W. Courtman/Laboratory Medicine & Pathobiology
S. Cowling/Geography
E. A. Cowper/Linguistics
B Cox/Materials Science & Engineering
T. Coyle/Materials Science & Engineering
P. C. Coyte/Health Policy, Management & Evaluation
A. Cozea/French
B. H. Craig/Information Studies
D. M. Craig/Life Course & Aging
F. I. Craik/Psychology
A. M. Crawford/Civil Engineering
G. Crawford/Anthropology
G. S. Cree/Psychology
J. Crispo/Management
D. Crooks/Nursing Science
A. R. Cruden/Geology
T. Cruz/Laboratory Medicine & Pathobiology
F. Csillag/Geography
1. G. Csizmadia/Chemistry
M. J. A. Cuddy-Keane/English
J. G. Culotti/Molecular & Medical Genetics
A. H. Cumming/Curriculum, Teaching & Learning
J. P. Cummins/Curriculum, Teaching & Learning
W. R. Cummins/Botany
A. Cunningham/Medical Biophysics
F. A. Cunningham/Philosophy
H. Cunningham/Anthropology
J. A. Cunningham/Psychology
W. A. Cunningham/Psychology
G. C. Cupchik/Psychology
J. H. Curran/Civil Engineering
D. Currie/Zoology
I. G. Currie/Mechanical & Industrial Engineering
M. Cusimano/Medical Science
S. R. Cutler/Botany
E. Cutz/Laboratory Medicine & Pathobiology
D. G. Cvitkovitch/Dentistry
M. I. Cybulsky/Laboratory Medicine & Pathobiology
H . Cyr/Zoology

A. Daar/Public Health Sciences
J. A. Dainard/French
J . Dainty/Botany
C. J. Damaren/Aerospace Science & Engineering
D. Daneman/Medical Science
M. Daneman/Psychology
M. Danesi/Anthropology
A. Daniere/Geography
J. S. Danska/Immunology
D. C. Darling/Zoology
G. Darlington/Public Health Sciences
V. L. Darroch-Lozowski/Curriculum, Teaching & Learning
J. N. Dasilva/Medical Science
M. Daviau/Near & Middle Eastem Civilizations

A. R. Davidson/Molecular & Medical Genetics
L. E. Davie/Curriculum, Teaching & Learning
A. T. Davies/Religion
J. Davies/Dentistry
S. W. Davies/Biomedical Engineering
A. Davis/Health Policy, Management & Evaluation
A. M. Davis/Geography
A. M. Davis/Physical Therapy
C. David/Mathematics
D. W. Davis/Geology
H. C. Davis/Mathematics
J. E. Davis/Theory & Policy Studies in Education
K. David/Law
K. D. Davis/Medical Science
N. Z. Davis/History
E. J. Davison/Electrical & Computer Engineering
D. R. Dawson/Occupational Therapy
F. P. Dawson/Electrical & Computer Engineering
R. B. Day/Political Science
T. Day/Zoology
J. R. D'Cruz/Management
J. C. De Azavedo/Laboratory Medicine & Pathobiology
U. De Boni/Physiology
H. B. de Groot/English
D. De Kerckhove/French
E. de Lara/Computer Science
J. H. de Leeuw/Aerospace Science & Engineering
L. F. De Nil/Speech-Language Pathology
A. H. de Quehen/English
E. De Rosa/Psychology
R. De Sousa/Philosophy
G. de Veber/Medical Science
W. G. Dean/Geography
C. M. Deber/Biochemistry
R. Deber/Health Policy, Management & Evaluation
G. Deboer/Medical Biophysics
K. Dehli/Sociology & Equity Studies in Education
G. Dei/Sociology & Equity Studies in Education
R. J. Deiber/Political Science
A. Del Junco/Mathematics
J. D. DeLaurier/Aerospace Science & Engineering
G. M. T. D'Eleuterio/Aerospace Science & Engineering
A. Demke Brown/Computer Science
N. G. Dengier/Botany
R. E. Dengler/Botany
C. E. Dennis/Nursing Science
J. W. Dennis/Molecular & Medical Genetics
M. Dennis/Medical Science
M. G. S. Denny/Economics
G. A. Denomme/Laboratory Medicine & Pathobiology
J. Dent/History
D. A. Deporter/Dentistry
S. D. Der/Laboratory Medicine & Pathobiology
W. B. Derry/Molecular & Medical Genetics
N. A. Derzko/Mathematics
R. C. Desai/Physics
J. R. Desloges/Geography
M. J. DeSouza/Exercse Sciences
P. Desrochers/Planning
S. S. Desser/Zoology
D. DeSveaux/Botany
A. Detsky/Health Policy, Management & Evaluation
G. M. Devins/Medical Science
s. B. Dewan/Electrical & Computer Engineering
M. Dewar/Classics
D. N. Dewees/Economics
A. Dhirani/Chemistry
E. P. Diamandis/Laboratory Medicine & Pathobiology
N. E. Diamant/Medical Science
C. T. P. Diamond/Curriculum, Teaching & Learning
M. L. Diamond/Geography
A. DiCenso/Nursing Science
J. J. DiCenso/Religion
J. E. Dick/Molecular & Medical Genetics
B.M. Dickens/Law
S. J. Dickinson/Computer Science
T. A. Dickinson/Botany
F. DiCosmo/Botany
A. P. Dierick/German
R. J. DiFrancesco/Geography
M. Dimnik/Medieval Studies
K. K. Dion/Psychology
L. L. Diosady/Chemical Engineering & Applied Chemistry
P. Dirks/Laboratory Medicine & Pathobiology
S. R. Dittakavi/Laboratory Medicine & Pathobiology
D. Dixon/Religion
M. F. N. Dixon/English
A. M. Dolan/Biomedical Engineering
L. Dolezel/Slavic
M. Dolezelova/East Asian Studies
L. A. Dolloff/Music
E. W. Domville/English
D. J. Donaldson/Chemistry
T. Donaldson/Religion
S. J. Done/Laboratory Medicine & Pathobiology
M . W. Donnelly/Political Science
P. A. Donnelly/Exercise Sciences
S. Donnelly/Health Policy, Management & Evaluation
G . J . Donner/Nursing Science
A. N. Doob/Criminology
A. Dooley/Medieval Studies
D. M. Doran/Nursing Science
P, Dorian/Pharrnacology
H. M. Dosch/lmmunology
J. O. Dostrovsky/Physiology
M. S. V. Douglas/Geology
E. W. Dowler/History
P. B. Downes/English

G. P. Downey/Medical Science
J. Drake/Medical Science
T. E. Drake/Physics
B. E. Dresher/Linguistics
R. B. Drewitt/Anthropology
D. J. Drucker/Medical Science
J. R. Drummond/Physics
J.-C. Duan/Management
I. Dube/Medical Science
J. Ducharme/Human Development & Applied Psychology
M. Ducharme/Exercise Sciences
D. G. Duff/Law
J. Duffin/Physiology
J. D. Duffy/English
J. Duggan/Law
D. Dumont/Medical Biophysics
D. W. Dunham/Zoology
D. J. Dunlop/Physics
P. Durie/Medical Science
D. Durocher/Molecular & Medical Genetics
J. Dutka/English
H. L. Dyck/History
I. J. A. Dyck/Management
C. C. Dyer/Astronomy & Astrophysics
D. Dyzenhaus/Law

J. M. Eakin/Public Health Sciences
A. Eardley/Architecture, Landscape, & Design
S. M. Easterbrook/Computer Science
W. M. Easterbrook/Medical Science
A. C. Easty/Biomedical Engineering
J. E. Eckenwalder/Botany
S. M. Eddie/Economcs
A. M. Edwards/Medical Biophysics
D. Edwards/Music
E. A. Edwards/Chemical Engineering & Applied Chemistry
R. N. Edwards/Physics
S. Egan/Molecular & Medical Genetics
M. E. Eichler/Sociology & Equity Studies in Education
T. R. Einarson/Pharmaceutical Sciences
G. Einstein/Public Health Sciences
J. A. Eisenberg/Theory & Policy Studies in Education
K. Eisenbichler/Italian
M. Eizenman/Biomedical Engineering
M. Eksteins/History
T. E. El-Diraby/Civil Engineering
L. Eleen/History of Art
G. V. Eleflheriades/Electrical & Computer Engineering
R. P. Elinson/Anatomy & Cell Biology
R. R. Elitzur/Management
C. Elkabas/French
R. El-Khoury/Architecture, Landscape, & Design
R. P. Ellen/Dentistry
E. W. Ellers/Mathematics
G. A. Elliott/Mathematics
R. Elliott/Music
J. Ellis/Molecular & Medical Genetics
K. A. Ellis/Spanish
O. M. El-Mowafy/Dentistry
H. P. ElSholtz/Laboratory Medicine & Pathobiology
A. El-Sohemy/Nutrition at Sciences
M. R. Emami/Aerospace Science & Engineering
A. Emili/Molecular & Medical Genetics
L. Endrenyi/Pharmacology
M. D. Engstrom/Zoology
W. H. Enright/Computer Science
S. Erb/Psychology
U. E. Erb/Materials Science & Engineering
B. H. Erickson/Sociology
P. G. Erickson/Sociology
R. V. Ericson/Criminology
A. Eriks-Brophy/Speech-Language Pathology
D. L. Esch/English
D. Escobar/Public Health Sciences
G. S. Espie/Botany
M. J. Esphl/Nursing Science
J. M. Estes/History
E. E. Echells/Medical Science
C. R. Ethier/Mechanical & Industrial Engineering
D. Etiemble/Electrical & Computer Engineering
J. Eubanks/Medical Science
G. Evans/Chemical Engineering & Applied Chemistry
M. G. Evans/Management
M. J. Evans/Statistics
N. C. Everett/History
I. Evreinov/Slavic
N . Eyles/Geology
D. Eyoh/Political Science
G. E. Eyssen/Public Health Sciences
S. Euat/Medical Science

M. Faig/Economics
T. F. Fairgrieve/Computer Science
R. A. Falck/Music
A. G. Falconer/French
V. C. Falkenheim/Political Science
J. B. Falls/Zoology
I. G. Fantus/Medical Science
J. K. Farge/Medieval Studies
R. Farnood/Chemical Engineering & Applied Chemistry
D. H. Farrar/Chemistry
J. P. Farrell/Curriculum Teaching & Learning
M. G. FehlingslMedical Science
T. S. Feild/Botany
A. Feinstein/Medical Science
U. Fekl/Chemistry
B. Feldman/Health Policy, Management & Evaluation
M. Feldman/Management

W. Feldman/Public Health Sciences
A. Fenner/German
R. G. Fenton/Mechanical & Industrial Engineering
G. Fenwick/English
S. Ferber/Psychology
H. B. Ferguson/Public Health Sciences
G. R. Fernie/Public Health Sciences
J. D. Fernie/Astronomy & Astrophysics
M. Ferrari/Human Development & Applied Psychology
R. G. Ferrence/Public Health Sciences
F. G. Ferris/Geology
L. E. Ferris/Public Health Sciences
A. Feuewerger/Statistics
G. Feuewerger/Curriculum, Teaching & Learning
F. E. Fich/Computer Science
E. D. Fillery/Dentistry
J. Filmus/Medical Biophysics
M. G. Finlayson/History
E. N. Fish/Immunology
B. T. Fitch/French
M. Fitch/Nursing Science
P. Fitting/French
E. L. Fiume/Computer Science
F. T. Flahiff/English
J . Flanagan/Medical Science
J. D. Fleck/Management
D. J. Fleet/Computer Science
A. S. Fleming/Psychology
E. P. Fleming/Information Studies
J. A. Fleming/French
J. F. Fletcher/Political Science
P. Fletcher/Psychology
A. J. Flint/Medical Science
J. S. Floras/Medical Science
J . E. Floyd/Economics
J. E. Foley/Psychology
P. J. Foley/Mechanical & Industrial Engineering
R. FoIson/Sociology & Equity Studies in Education
E. Fong/Sociology
D. K. Foot/Economics
H. D. Forbes/Political Science
M. Ford/Theory & Policy Studies in Education
J. F Oman-Kay/Biochemistry
C. R. Forrest/Medical Science
M.-J. Fortin/Zoology
S. Foster/Medical Biophysics
F. R. Foulkes/Chemical Engineering & Applied Chemistry
M. Fournier/Psychology
B. J. Fox/Sociology
H. Fox/Religion
M. S. Fox/Mechanical & Industrial Engineering
G. Frame/Near & Middle Eastern Civilizations
A. Franceschetti/Italian
B. A. Francis/Electrical & Computer Engineering
J. W. Frank/Public Health Sciences
R. Frank/Medieval Studies
U. M. Franklin/Materials Science & Engineering
P. Franks/Philosophy
L. D. Frappier/Molecular & Medical Genetics
C. G. Fraser/History & Philosophy of Science & Technology
D. A. S. Fraser/Statistics
P. E. Fraser/Medical Biophysics
S. J. Fraser/Chemistry
D. R. Frayne/Near & Middle Eastern Civilizations
R. Frecker/Biomedical Engineering
J. Freedman/Medical Science
J. L. Freedman/Psychology
M. Freedman/Medical Science
S. E. Fremes/Medical Science
N. J. Frenette/Curriculum, Teaching & Learning
J. Frey/Electrical & Computer Engineering
J. Friedland/Occupational Therapy
M. L. Friedland/Law
J. B. Friedlander/Mathematics
S. Friedman/Dentistry
H. B. Friedmann/Sociology
S. Friefeld/Occupational Therapy
J. D. Friesen/Medical Biophysics
T. M. Friesen/Anthropology
J. Frim/Exercise Sciences
M. Fullan/Sociology & Equity Studies in Education
J . H . Fullard/Zoology
E. Fuller-Thomson/social Work
R. R. Fulthorpe/Botany
B. Funnell/Molecular & Medical Genetics
J. J. Furedy/Psychology
M. A, Fuss/Economics

G. H. Gad/Geography
A. Gagne/Curriculum Teaching & Learning
H. Y. Gaisano/Medical Science
D. I. Galbraith/English
K. M. Gallagher/Drama
B. L. Gallie/Molecular & Medical Genetics
S. Gallinger/Medical Science
R. M. Gallop/Nursing Science
J . H . Galloway/Geography
P. J. Gamlin/Adua Education & Counselling Psychology
J. Ganczarczy/Civil Engineering
L. Gardner/Mathematics
P. E. Garfinkel/Medical Science
J. Ganepy/Medical Biophysics
J. Gariepy/Pharmaceutical Sciences
R. F. Garrison/Astronomy & Astrophysics
L. R. Garshowitz/Near & Middle Eastem Civilizations
M. J. Garson/English
R. I. Gartner/Criminology
J. Gaskell/Theory & Policy Studies in Education

D. GaStaldo/Nursing Science
D. P. Gauvreau/Civil Engineering
C. Genno/German
S. R. George/Pharmacology
U. George/Social Work
M. Georges/Chemistry
D. Gerin-Lajoie/Curriculum, Teaching & Learning
R. Gerlai/Psychology
L. P. Gerson/Philosophy
M. S. Gertler/Geography
M. Gervers/History
E. Geva/Human Development & Applied Psychology
A. Giacca/Physiology
R. B. Gibbs/Philosophy
D. L. Gibo/Zoology
M. Gieri/Italian
L. Gilady/Political Science
E. Gilbert/Geography
A. R. Gillis/Sociology
J. R. Gillis/Adult Education & Counselling Psychology
G . S . Gillison/Anthropology
Y. Gingras/History & Philosophy of Science & Technology
L. E. Girolametto/Speech-Language Pathology
D. D. Gladman/Medical Science
R. Glazier/Health Policy, Management & Evaluation
R. J. Glickman/Spanish
J. Globerman/Social Work
J. R. GIover/Biochemistry
D. Godt/Zoology
V. GoeI/Health Policy, Management & Evaluation
J. W. Goering/History
P. Goering/Nursing Science
W. Goetschel/German
W. A. Goffart/History
M. C. Goh/Chemistry
M. Gold/Molecular & Medical Genetics
P. Goldberg/Anthropology
S. Goldberg/Psychology
B. R. Golden/Management
A. A. Goldenberg/Mechanical & Industrial Engineering
G. J. Goldenberg/Pharmacology
M. B. Goldman/English
D. Goldstein/Psychology
M. Goldstein/Mathematics
R. S. Goldstein/Medical Science
T. Goldstein/Curriculum, Teaching & Learning
O. Goldstick/Philosophy
L. V. Golombek/Near & Middle Eastem Civilizations
A. M. Gombay/Philosophy
P. W. Gooch/Philosophy
R. C. Goode/Exercise Sciences
J. M. Goodman/Exercise Sciences
L. Goodman/Exercise Sciences
M. S. Goodstadt/Public Health Sciences
K. Goonewardena/Geography
R. M. Gorczynski/Immunology
M. J. Gordon/Management
D. R. Goring/Botany
M. P. Gorton/Geology
A. I. Gotlieb/Laboratory Medicine & Pathobiology
C. C. Gotlieb/Computer Science
M. Gotlieb/History of Art
B. H. Gottlieb/Exercise Sciences
J. J. Gottlieb/Aerospace Science & Engineering
W. A. Gough/Geography
C. S. Goufleroux/Economics
M. W. Grabinsky/Civil Engineering
C. L. Grady/Psychology
G. S. Graham/Computer Science
I. R. Graham/Mathematics
S. J. Graham/Medical Biophysics
D. M. Grant/Pharmaceutical Sciences
J. Grant/Classics
P. R. Grant/Aerospace Science & Engineering
P. T. R. Gray/Medieval Studies
J. E. Graydon/Nursing Science
S. Gray-Owen/Molecular & Medical Genetics
A. K. Grayson/Near & Middle Eastem Civilizations
R. I. Graziani/English
K. H. Green/Religion
G. R. Greenberg/Physiology
J. F. Greenblatt/Molecular & Medical Genetics
R. T. Greene/English
D. W. Greeno/Management
B. Greenwood/Geography
C. E. Greenwood/Nutritional Sciences
A. R. Greer/History
R. Gregor/Political Science
P. C. Greiner/Mathematics
P. F. Grendler/History
P. A. Griffin/Physics
F. J. Griffiths/Political Science
S. Grinstein/Biochemistry
C. M. Grise/French
A. E. Gross/Biomedical Engineering
M. R. Gross/Zoology
C. P. T. Groth/Aerospace Science & Engineering
M. Gruninger/Mechanical & Industrial Engineering
L. A. Grupp/Pharmacology
J. E. Grusec/Psychology
M. D. Grynpas/Laboratory Medicine & Pathobiology
K. A. Grzymski/Near & Middle Eastem Civilizations
F. Guardian/Italian
S. E. Guenther/Near & Middle Eastern Civilizations
A. Guha/Medical Science
C. J. Guidos/Immunology
J. E. Guillet/Chemistry
R. W. Guisso/East Asian Studies
P. G. Gulak/Electrical & Computer Engineering

O. L. GuIder/Aerospace Science & Engineering
J. GuIsoy/Spanish
M. K. Gunderson/Economics
H. P. Gunz/Management
N. Gupta/Medical Science
J. W. Gurd/Biochemistry
D. S. Guttman/Botany
I. Guttman/Statistics
M. A. Guttman/Adult Education & Counselling Psychology
D. T. Gwynne/Zoology

A. A. Haasz/Aerospace Science & Engineering
D. P. Hache/Theory & Policy Studies in Education
I. M. Hackjng/Philosophy
R. Hackworth/Geography
R. Haddow/Political Science
V. Hadzilacos/Computer Science
J. L. Hagan/Sociology
M. Hager/German
R. Hakem/Medical Biophysics
W. H. Halewood/English
B. L. Hall/Adult Education & Counselling Psychology
B. S. Hall/History & Philosophy of Science & Technology
F. L. Hall/Civil Engineering
P. E. Hallett/Zoology
H. C. Halls/Geology
I. Halperin/Mathematics
J. S. Halperin/Mathematics
E. B. Halpern/History
P. J. Halpern/Management
P. A. Hamel/Laboratory Medicine & Pathobiology
G. Hamilton/Economics
L. Hamm/Exercise Sciences
M. F. Hammond/Sociology
D. R. Harnpson/Pharmaceutical Sciences
G. Hanna/Curriculum, Teaching & Learning
M. E. Hannah/Health Policy, Management & Evaluation
K. Hannah-Moffat/Sociology
L. M. Hannay/Curriculum, Teaching & Learning
G. E. Hannigan/Laboratory Medicine & Pathobiology
J. A. Hannigan/Sociology
R. I. C. Hansell/Zoology
J. S. Hansen/Aerospace Science & Engineering
W. Haque/Mathematics
M. B. Harley/Curriculum, Teaching & Learnlng
P. Harper/Pharmacology
A. Harrak/Near & Middle Eastern Civilizations
L. Harrington/Medical Biophysics
A. G. Harrison/Chemistry
R. Harrison/Zoology
R. V. Harrison/Medical Science
T. P. Harrison/Near & Middle Eastern Civilizations
J. R. Hartenberger/Music
E. B. Harvey/Sociology & Equity Studies in Education
E. D. Harvey/English
E. R. Harvey/English
H. H. Harvey/Zoology
L. D. Harvey/Geography
W. Harvey/Philosophy
C. A. Hasenkampf/Botany
L. Hasher/Psychology
A. Hassanpour/Near & Middle Eastern Civilizations
D. Hatzinakos/Electrical & Computer Engineering
C. Hatzis/Music
E. Hauer/Civil Engineering
B. J. Havercroft/French
G. HawkedHealth Policy, Management & Evaluation
J. Hawkins/Music
S. Hawkins/History
S. A. Hawkins/Management
J. B. Hay/lmmunology
R. E. Hayhoe/Theory & Policy Studies in Education
8. S. Hayne/English
A. diP. Healey/Medieval Studies
J. Heath/Philosophy
M. C. Heath/Botany
E. Heathcote/Medical Science
D. Hedley/Medical Biophysics
J. N. Heersche/Dentistry
E. C. Hehner/Computer Science
T. Heim/Medical Science
E. A. Heinemann/French
W. Hejazi/Management
J. A. Hellebustle/Botany
G. K. Helleiner/Economics
M. S. Heller/Sociology & Equity Studies in Education
R. J. Helmstadter/History
A. S. Helmy/Electrical & Computer Engineering
C. Helwig/Psychology
W. Hempel/German
G. E. Henderson/English
G. S. Henderson/Geology
M. Henkelman/Medical Biophysics
J. L. Henry/Civil Engineering
E. Heon/Medical Science
C. P. Herman/Psychology
P. R. Herman/Electrical & Computer Engineering
M. Herren/Medieval Studies
N. Herrmann/Medical Science
A. Hertzmann/Computer Science
R. J. Heslegrave/Exercise Sciences
C. R. Hetherington/Psychology
D. Hewitt/Public Health Sciences
J. G. Hewitt/Curriculum, Teaching & Learning
M. Hewitt/Religion
S. E. Hidi/Curriculum, Teaching & Learning
V. J. Higgins/Botany
D. C. Higgs/History
A. Hildyard/Theory & Policy Studies in Education

R. P. Hill/Medical Biophysics
E. M. Hillan/Nursing Science
J. Hillgarth/Medieval Studies
K. W. Hindmarsh/Pharmaceutical Sciences
A. Hinek/Laboratory Medicine & Pathobiology
G. E. Hinton/Computer Science
R. Hirsch/Political Science
G. Hirst/Computer Science
J. Hladki/Sociology & Equity Studies in Education
E. Hodnett/Nursing Science
D. Hodson/Curriculum, Teaching & Learning
F. P. Hoff/East Asian Studies
J. A. Hogan/Psychology
D. H. Hogg/Medical Science
S. Hogg-Johnson/Public Health Sciences
C. W. Hoque/Biochemistry
A. Holbrook/Pharmaceutical Sciences
B. Holdom/Physics
J. S. Holladay, &./Near & Middle Eastern Civilizations
S. Hollander/Economics
D. L. Holness/Public Health Sciences
T. F. Homer-Dixon/Politicai Science
S. Hong/History & Philosophy of Science & Technology
A. D. Hood/History
F. C. Hooper/Mechanical & industrial Engineering
R. D. Hooton/Civil Engineering
P. A. Horgen/Botany
K. Hori/Physics
R. L. Homer/Medical Science
G. Horowitz/Political Science
I. J. Horstmann/Management
S. E. Horton/Economics
A. J. Hosios/Economics
M. H. Hough/Laboratory Medicine & Pathobiology
W. Houry/Biochemistry
K. W. Howard/Geology
W. J. Howard/English
L. C. Howarth/Information Studies
L. HoweII/Biochemistry
N. Howell/Sociology
S. K. Howson/Economics
J. J. Hsieh/Public Health Sciences
P. C. Hsiung/Sociology
J. Hu/Medical Science
J. W. Hu/Dentistry
M. Hubbes/Forestry
C. Hudson/Medical Science
A. Hughes/Music
P. C. Hughes/Aerospace Science & Engineering
R. Hughes/Molecular & Medical Genetics
C. C. Hui/Molecular & Medical Genetics
J. D. Hulchanski/Social Work
J. C. HuII/Management
J. N. P. Hume/Computer Science
T. Humphries/Human Development & Applied Psychology
D.. Hunt/Adult Education & Counselling Psychology
J. W. Hunt, Prof. Emer/Medical Biophysics
V. F. Hurdle/Civil Engineering
T. Hurka/Philosophy
M, Husain/Laboratory Medicine & Pathobiology
L. A. M. Hutcheon/English
D. S. Hutchinson/Philosophy
P. A. Hwang/Medical Science
D. E. Hyatt/Industrial Relations
M. L. Hyde/Speech-Language Pathology
J. A. Hynes/Economics

F. Iacovetta/History
A. A. Iannucci/Comparative Literature
P. I. Idaho/Sociology & Equity Studies in Education
K. Iizuka/Electrical& Computer Engineering
M. Ikura/Medical Biophysics
T. Inaba/Pharmacology
J. N. Ingham/History
C. J. Ingles/Biochemistry
R. D. Inman/Medical Science
B. C. Inwood/Classics
M. R. Iravani/Electrical & Computer Engineering
K. Ireton/Molecular & Medical Genetics
L. Iribarne/Slavic
H. H. Irving/Social Work
D. M. Irwin/Laboratory Medicine & Pathobiology
M. E. Irwin/Classics
W. W. Isajiw/Sciology
N. N. Iscove/medical Biophysics
J. Iseke-Barnes/Sociology & Equity Studies in Education
D. E. Isenman/Biochemistry
M. Israel/History
S. Ito/Pharmacology
R. Iton/Political Science
V. Ivrii/Mathematics
G. O. Ivy/Psychology

R. Jaakson/Geography
G. Jackowski/Laboratory Medicine & Pathobiology
O. A. Jackson/Zoology
H. J. Jackson/English
J. R. Jackson/English
K. R. Jackson/Computer Science
N. Jackson/Adult Education & Counselling Psychology
A. E. Jacobs/Physics
I.. Jacobs/Exercise Sciences
H. A. Jacobsen/Electrical & Computer Engineering
A. R. Jadad/Health Policy, Management & Evaluation
D. Jaffray/Medical Biophysics
S. B. Jaglal/Physical Therapy
M. Jain/Public Health Sciences

D. F. James/Mechanical & Industrial Engineering
D. M. James/Linguistics
G. A. Jamieson/Mechanical & Industrial Engineering
W. Janischewskyj/Electrical & Computer Engineering
A. K. Jardine/Mechanical & Industrial Engineering
K. Jarvi/Medical Science
R. Jayawardhana/Astronomy & Astrophysics
E. Jeauneau/Medieval Studies
K. N. Jeejeebhoy/Medical Science
R. L. Jefferies/Botany
L. C. Jeffrey/Mathematics
D. J. Jenkins/Nutritional Sciences
J. Jenkins/Human Development & Applied Psychology
J. L. Jenkins/History
E. T. Jennings/History
A. D. Jepson/Computer Science
R. Jerrard/Mathemaiics
R. E. Jervis/Chemical Engineering & Applied Chemistry
M. A. Jewett/Medical Science
C. Q. Jia/Chemical Engineering& Applied Chemistry
T. Jim/Medical Science
S. John/Physics
A. Johns/Linguistics
D. A. Johns/Electrical & Computer Engineering
C. J . Johnson/Speech-Language Pathology
R. E. Johnson/History
S. B. Johnson/Drama
W. M. Johnson/History of Art
A. F. Johnston/English
D. M. Johnston/Law
G. S. Johnston/Music
K. W. Johnston/Biomedical Engineering
M. G. Johnston/Laboratory Medicine & Pathobiology
A. R. Jones/Classics
B. A. Jones/Physics
C. L. Jones/Sociology
G. A. Jones/Theory & Policy Studies in Education
G. G. Jones/Music
J. B. Jones/Chemistry
J. Jongstra/Immunology
S. Joordens/Psychology
A. J. Jordan/Curriculum, Teaching & Learning
A.O.Jorensen/Biochemistry
R. Joshee/Theory & Policy Studies in Education
S. JoShi-Sukhwal/Molecular & Medical Genetics
S. Jothy/Laboratory Medicine & Pathobiology
M. Joy/Electrical & Computer Engineering
S. R. Julian/Physics
M. H. Julius/Immunoiogy
G . V . Jump/Economics
V. Jurdjevic/Mathematics
I. Jurisia/Medical Biophysics
A. J. Jwaideh/Near & Middle Eastern Civilizations
B. M. Kaczynski/Medieval Studies
D. Kadar/Pharmacology
K. Kain/Laboratory Medicine & Pathobiology
H . Kalant/Pharmacology
P. G. Kalman/Medical Science
I. Kalmar/Anthropology
I. V. Kalnis/Public Health Sciences
V. I. Kalnins/Biochemistry
W. Kalow/Pharmacology
S. Kamel-Reid/Laboratory Medicine & Pathobiology
R. M. P. Kan/Management
C. Kanaganayakam/English
R. Kande/Laboratory Medicine & Pathobiology
S. Kant/Forestry
A. S. Kaplan/Medical Science
D. R. Kaplan/Molecular & Medical Genetics
L. Kaplan/History of Art
R. E. Kapral/Chemistry
M. Kapranov/Mathematics
S. Kapur/Medical Science
A. Kapus/Medical Science
B. W. Karney/Civil Engineering
Y. Karshon/Mathematics
M. Kasturi/History
B. O. Katz/Philosophy
J. Katz/Medical Science
D. Katzman/Medical Science
R. Kaul/Medical Science
E. M. Kavaler/History of Art
B. Kavanagh/Medical Science
T. Kavanagh/Exercise Sciences
M. Kawaji/Chemical Engineering & Applied Chemistry
K. Kawashima/East Asian Studies
L. Kay/Molecular & Medical Genetics
R. A. Kazal/History
E. J. Keall/Near & Middle Eastem Civilizations
A. Keating/Medical Science
H.-Y. Kee/Physics
F. W. Keeley/Biochemistry
J. F. Keffer/Mechanical & Industrial Engineering
C. A. Keil/History
A. Keith/Classics
B. G. Kelly/Curriculum, Teaching & Learning
M. Kelner/Public Health Sciences
D. Kelvin/Immunology
C. A. Kennedy/Civil Engineering
J. L. Kennedy/Medical Science
J. M. Kennedy/Psychology
S. H. Kennedy/Medical Science
T. C. Kenney/Civil Engineering
D. J. Kenny/Dentistry
R. S. Kerbel/Medical Biophysics
D. Kerr/Geography
G. A. Kerr/Exercise Sciences
P. O. Kerr/Geography

L. C. Kerslake/French
J. B. Kervin/Sociology
S. Keshavjee/Medical Science
A. W. Key/Physics
N. Khanlou/Nursing Science
J. M. Khanna/Pharmacology
B. Khesin/Mathematics
R. Khokha/Medical Biophysics
A. Khoury/Biomedical Engineering
A. Khovanskii/Mathematics
B Kidd/Exercise Sciences
B. S. Kilbourn/Curriculum, Teaching & Learning
H. Kim/Mathematics
P. C. Kin/Medical Science
Y. Kim/Nutritional Sciences
Y. B. Kim/Physics
Y.-J. Kim/Physics
P. King/Philosophy
P. Kingston/Poetical Science
M. G. Kingwell/Philosophy
J. R. Kippen/Music
D. W. Kirk/Chemical Engineering & Applied Chemistry
M. C. Kirkham/English
B. Kirsh/Occupational Therapy
J. J. Kirton/Political Science
E. Kirzner/Management
S. J. Kish/Pharmacology
J. Kivimae/History
J. Klamut/Medical Biophysics
N. Klar/Public Health Sciences
P. Klassen/Religion
D. N. Klausner/Medieval Studies
P. Kleber/Comparative Literature
K. A. Klein/Civil Engineering
M. A. Klein/History
M. R. Kleindienst/Anthropology
A. Klip/Biochemistry
J. Kloppenborg/Religion
R. H. Kluger/Chemistry
K. Knight/Satistics
K. Knop/Law
G. Knowles/Adult Education & Counselling Psychology
R. Knowles/Drama
L. Kofman/Theoretical Astrophysics
L. M. Kohn/Botany
M. C. Kolios/Medical Biophysics
H. F. Kolodny/Management
L. Komaromi/Comparative Literature
A. Konrad/Electrical & Computer Engineering
A. A. Kontodpolitical Science
M. Koortbojian/History of Art
M. Kooy/Curriculum, Teaching & Learning
J. Kopstein/Political Science
G. Koren/Medical Science
J. Kornberg/History
M. T. Kortscht/Chemical Engineering & Applied Chemistry
C. Kosnik/Curriculum, Teaching & Learning
P. M. Kotanen/Botany
N. Koudas/Computer Science
T. Koznarsky/Slavic
G. Kraemer/Psychology
M. D. Krahn/Health Policy, Management & Evaluation
M. D. Krahn/Pharmaceutical Sciences
C. E. Kramer/Slavic
L. Krames/Psychology
M. Krashinsky/Industrial Relations
D. Krass/Management
H. Krause/Molecular & Medical Genetics
N. Kreiger/Public Health Sciences
N. Krementsov/History & Philosophy of Science & Technology
P. Kremer/Philosophy
J. J. Krepinsky/Molecular & Medical Genetics
A. J. Kresge/Chemistry
P. Krieger/Physics
T. E. Krogh/Geology
M. Krondl/Nutritional Sciences
H. J. Kronzucker/Botany
U. J. Krull/Chemistry
F. R. Kschischang/Electrical & Computer Engineering
D. Kuhn/Chemical Engineering & Applied Chemistry
A. Kukla/Psychology
G. Kulesha/Music
E. Kumachea/Chemistry
D. Kundur/Electrical & Computer Engineering
H. Kunov/Electrical & Computer Engineering
I. Kupka/Mathematics
E. K. Kushner/Comparative Literature
P. J. Kushner/Physics
K. Kutulakos/Computer Science
H. C. Kwan/Physiology
R. H. Kwon/Mechanical & Industrial Engineering
R. H. Kwong/Electrical & Computer Engineering

C. La Vigna/History
S. Laaksonen-Craig/Forestry
N. Labrie/Curriculum, Teaching & Learning
T. Lahusen/History
M. E. Laiken/Adult Education & Counselling Psychology
T. Lam/Curriculum, Teaching & Learning
M. J. Lambek/Anthropology
A. C. Lancashire/English
D. I. Lancashire/English
D. Landheer/Materials Science & Engineering
R. G. Landon/English
B. G. Lane/Biochemistry
D. W. Langh/Theory & Policy Studies in Education
N. C. Lang/Social Work
B. A. Lange/Zoology

L. Lange/Philosophy
B. A. Langille/Law
B. L. Langille/Laboratory Medicine & Pathobiology
J. Langins/History & Philosophy of Science & Technology
K. A. Lantz/Slavic
S. J. Lapkin/Curriculum, Teaching & Learning
J. Larkin/Sociology & Equity Studies in Education
E. W. Larsen/Zoology
H. Laschinger/Nursing Science
G. P. Latham/Management
M. A. Latta/Anthropology
H. Lau/Laboratory Medicine & Pathobiology
E. C. Laufer/Music
A. Laupacis/Health Policy, Management & Evaluation
M. Lautens/Chemistry
J. D. Lavers/Electrical & Computer Engineering
B. D. Lavoie/Molecular & Medical Genetics
s. Law/Management
H. G. Lawford/Biochemistry
B. Lawrence/Sociology & Equity Studies in Education
S. B. Lawton/Theory & Policy Studies in Education
R. Le Huenen/French
J. L. Leake/Dentistry
P. Leatt/Public Health Sciences
J. LeBlanc/French
L. Leduc/Political Science
C.-G. Lee/Mechanical & Industrial Engineering
D. H. Lee/Architecture, Landscape, & Design
E. S. Lee/Electrical & Computer Engineering
M. J. Lee/Physics
P. I. Lee/Pharmaceutical Sciences
R. B. Lee/Anthropology
A. M. Leggatt/English
E. M. Legge/History of Art
A. B. Lehman/Mathematics
P. W. Lehn/Electrical & Computer Engineering
E. Lehouck/French
L. A. Leiter/Nutritional Sciences
L. Leith/Exercise Sciences
K. A. Leithwood/Theory & Policy Studies in Education
L. Lemieux-Charles/Health Policy, Management & Evaluation
J. T. Lemon/Geography
H. I. Lenskyj/Sociology & Equity Studies in Education
P. Leon/French
P. R. Leon/Spanish
G. M. Leonard/English
K. J. Leonard/Health Policy, Management & Evaluation
A. Leon-GarciaElectrical & Computer Engineering
J. R. Lepock/Medical Biophystcs
R. J. Leprohon/Near & Middle Eastem Civilizations
D. Leslie/Geography
J. B. Lester/Astronomy & Astrophysics
M. Letarte/Immunology
M. Lettier/Italian
M. J. Levene/English
J. L. Levenson/English
T. H. Levere/History & Philosophy of Science & Technology
H. J. Levesque/Computer Science
R. Levi/Criminology
M. D. Levin/Anthropology
B. LeVine/Psychology
D. C. Levine/Theory & Policy Studies in Education
J. Levine/Zoology
w. Levinson/Medical Science
E. Levy/History of Art
G. A. Levy/Medical Science
D. M. Lewis/Electrical & Computer Engineering
G. Lewis/Medical Science
M. D. Lewis/Human Development & Applied Psychology
P. N. Lewis/Biochemistry
R. D. Lewis/Geography
S. M. Lewis/Molecular & Medical Genetics
J . F . Leyerle/English
D. Li/Mechanical & Industrial Engineering
H. Li/Economics
H. Li/English
P. Li/Pharmacology
R. K. Li/Medical Science
T. Li/Anthropology
Y. Li/Management
J. Liaschenko/Nursing Science
L. Libkin/Computer Science
D. Lidar/Chemistry
B. Liebgott/Dentistry
B. V. Lightman/History & Philosophy of Science & Technology
E. S. Lightman/Social Work
L. Lilge/Medical Biophysics
T. J. Lim/Electrical & Computer Engineering
A. V. Liman/East Asian Studies
H. Limeback/Dentistry
X. Lin/Statistics
N. Linheim/English
R. Lindheim/Slavic
P . H . Lindsay/Human Development & Applied Psychology
T. Lindsay/Medical science
C. A. Lingwood/Laboratory Medicine & Pathobiology
P. Links/Medical Science
H. Lipshitz/Molecular & Medical Genetics
A. E. Litherland/Physics
F. Liu/Medical Biophysics
H. H. T. Liu/Aerospace Science & Engineering
J. Liu/Molecular & Medii Genetics
J. Liu/East Asian Studies
M. Liu/Medical Science
P. Liu/Physiology

P. P. Liu/Medical Science
L. Livak/Slavic
R. A. Liversage/Zoologyy
D. W. Livingstone/Sociology & Equity Studies in Education
H. Llewellyn-Thomas/Medical Science
T. O. Lloyd/History
H. K. Lo/Electrical & Computer Engineering
c. Lobe/Medical Biophysics
M. Locke/Exercise Sciences
D. Locker/Medical Science
R. S. Lockhart/Psychology
P. J. Lockwood/Psychology
A. J. Locock/Geology
L. Loeb/History
A. G. Logan/Health Policy, Management & Evaluation
R. K. Logan/Physics
J. Long/Electrical & Computer Engineering
M. Lord/French
J. W. Lorimer/Mathematics
W. Lou/Public Health Sciences
R. L. Love/Public Health Sciences
D. A. Lovejoy/Zoology
M. Lovett/Psychology
D. E. Low/Laboratory Medicine & Pathobiology
A. Lozano/Medical Science
Z. H. Lu/Materials Science & Engineering
G. L. Lukacs/Medical Science
M. E. Luke/Physics
C. J. Lumsded/Medical Science
H. V. Luong/Anthropology
G. J. Luste/Physics
R. T. Lutz/Near & Middle Eastern Civilizations
S. J. Lye/Physiology
R. J. Lynn/East Asian Studies
M. Lyubich/Mathematics

S. M. Mabury/Chemistry
M. Macadam/Social Work
C . MacArthur/Rehabilitation Science
H. R. Maccallum/English
J. F. MacDonald/Physiology
K. MacDonald/Medical Science
L. E. Macdonald/Music
P. Macdonald/Chemistry
L. S. MacDowell/History
R. J. MacFadden/Social Work
R. B. Macgregor/Pharmaceutical Sciences
J. G. Macintosh/Law
D. Mackay/Chemical Engineering & Applied Chemistry
R. W. Mackay/Sociology
W. A. Mackay/Physiology
L. D. MacKeigan/Pharmaceutical Sciences
M. P. Macklem/Law
A. Macklin/Law
V. W. Maclaren/Geography
H. Maclean/Nursing Science
H. L. MacLean/Civil Engineering
S.-B MacLean/English
D. H. Maclennan/Biochemistry
C. M. Macleod/Psychology
M. O. MacMillan/History
M. MacNeill/Exercise Sciences
J. Macpherson/English
J. C. Magee/Classics
W. Magee/Sociology
M. Maggiore/Electrical & Computer Engineering
D. W. Magill/Sociorogy
J. L. Magnusson/Theory & Policy Studies in Education
L. Magnusson/English
P. R. Magocsi/Political Science
D. Mahuran/Laboratory Medicine & Pathobiology
L. M. Mainwaring/Exercise Sciences
T. W. Mak/Medical Biophysics
B. E. Maki/Medical Science
V. Makis/Mechanical & Industrial Engineering
J. Malcolm/Forestry
D. Malkin/Medical Science
D. W. Malloch/Botany
A. Mandelis/Mechanical & Industrial Engineering
R. E. Mann/Public Health Sciences
S. Mann/Electrical & Computer Engineering
L. L. Manne/Zoology
1, Manners/Chemistry
S. Manning/History of Art
M. Manolson/Dentistry
A. Manoukian/Medical Biophysics
R. A. Manzer/Political Science
P. J. Marbach/Computer Science
R. S. Marjoribanks/Physics
F. J. Marker/English
L. L. Marker/Drama
A. Marks/Biochemistry
L. Marks/Sociology & Equity Studies in Education
M. E. Marmura/Near & Middle Eastem Civilizations
M. L. Marrese/History
L. D. Marrett/Public Health Sciences
M. R. Marrus/History
P. Marsden/Medical Science
J. C. Marshall/Medical Science
K. W. Marshall/Medical Science
V. W. Marshall/Public Health Sciences
J. A. Marshman/Pharmaceutical Sciences
A. Martel/Medical Biophysics
D. L. Martell/Forestry
J. F. Martin/Physics
K. Martin/Electrical & Computer Engineering
P. G. Martin/Theoretical Astrophysics
P. J. Martin/French
R. L. Martin/Management

R. MaTtino/Speech-Language Pathology
J. R. R. A. Martins/Aerospace Science & Engineering
E. A. Marziali/Social Work
A. Mason/Zoology
H . J . Mason/Classics
D. Massam/Linguistics
D. R. Masson/Mathematics
Y. Masui/Zoology
G. F. Mathewson/Economics
R. A. Mathon/Computer Science
R. O. Matthews/Political Science
S. G. Matthews/Physiology
J. L. Matus/English
C. D. Matzner/Astronomy & Astrophysics
J. O. Mavalwala/Anthropology
A. N. May/Physics
H. Mayberg/Medical Science
H. Mayer/German
J. T. MayhaII/Dentistry
J. S. Mayo/Music
P. M. Mazumdar/History & Philosophy of Science & Technology
T. Mazzulli/Laboratory Medicine & Pathobiology
J. H. McAndrews/Botany
M. P. Mcandrews/Psycholoqy
B. Y. McCabe/CiviI Engineering
S.. McCahan/Mechanical & Industrial Engineering
D. McCammond/Mechanical & Industrial Engineering
R. McCann/Mathematics
P. McCarney/Political Science
J. A. McClelland/French
R. A. McClelland/Chemistry
J. K. McConica/Medieval Studies
J. McCool/Mathematics
P. D. McCourt/Botany
C. A. McCulloch/Dentistry
E. A. Mcculloch/Medical Biophysics
T. H. McCurdy/Management
L. McDonald/Social Work
C. McDonough/Classics
P. A. Mcdonough/Public Health Sciences
D . McDougall/Curricuium, Teaching & Learning
P. J. McDunnough/Statistics
B. S. Mcelhinny/Anthropology
B. McEvily/Management
M. J. McGavin/Laboratory Medicine & Pathobiology
T. J. McGee/Music
A. J. McGeer/Medical Science
J. Mcglade-Dolson/Medical Biophysics
M. McGowan/History
S. A. Mcllraith/Computer Science
W. E. McIlroy/Physical Therapy
T. Mcllwraith/Geography
R. R. Mclnnes/Molecular & Medical Genetics
C. T. Mclntire/Religion
A. R. Mcintosh/Psychology
N. McKee/Medical Science
P. D. McKeever/Nursing Science
C. MCKerlie/Laboratory Medicine & Pathobiology
M. F. McKneally/Medical Science
J. R. Mclaughlin/Public Health Sciences
P. R. Mclaughlin/Medical Science
J. McLaurin/Laboratory Medicine & Pathobiology
A. Mclean/Materials Science & Engineering
K. McLean/Psychology
L. D. McLean/Curriculum, Teaching & Learning
R. S. Mclean/Curriculum Teaching & Leaming
S. McLean/Chemistry
T. Mclellan/Exercise Sciences
D. A. McLennan/Zoology
R. R. Mcleod/English
R. S. McLeod/Health Policy, Management & Evaluation
D. McMillen/Chemistry
N. F. McMullin/Religion
D. A. McQuillan/Geography
K. T. Meacham/Near & Middle Eastern Civilizations
J. Medin/Medical Biophysics
D. E. Meeks/Social Work
S. A. Meguid/Mechanical & Industrial Engineering
E. Meinrenken/Mathematics
A. Melino/Economics
E. Mendelsohn/Mathematics
J. Mendelson/Medical Science
A. O. Mendelzon/Computer Science
R. A. Mendelzon/Nutritional Sciences
U. Menzefricke/Management
M. Menzinger/Chemistry
B. Merrilees/French
H. A. Messner/Medical Science
S. Metso/Near & Middle Eastern Civilizations
M. D. Meyerson/History
M. S. Meyd/Molecular & Medical Genetics
A. D. Miall/Geology
W. Michelson/Sociology
L. L. Mickleborough/Medical Science
R. Midha/Medical Science
S. A. Miezitis/Adult Education & Counselling Psychology
A. Mihailidis/Ooccupational Therapy
G. Mikhalkin/Mathematics
D. Mikulis/Medical Science
A. R. Miles/Adult Education & Counselling Psychology
N. W. Milgram/Psychology
P. Milgram/Mechanical & Industrial Engineering
B. Milkereit/Physics
D. R. Miller/Chemistry
E. J. Miller/Civil Engineering
F. Miller/Molecular & Medical Genetics
J. Miller/Medical Science
J. P. Miller/Curriculum, Teaching & Learning

M. C. Miller/History of Art
O. J. Miller/French
R. G. Miller/Medical Biophysics
R. J. Miller/Computer Science
J. Millgate/English
M. H. Millgate/English
J. K. Mills/Mechanical & Industrial Engineering
K. R. Mills/History
L. R. MillS/Physiology
M. E. Millson/Public Health Sciences
P. Milman/Mathematics
M. Milner/Biomedical Engineering
C. A. Mims/Chemical Engineering & Applied Chemistry
M. D. Minden/Medical Biophysics
S. Minkin/Medical Biophysics
J. O. Minta/Laboratory Medicine & Pathobiology
J. M. Mintz/Management
K. Mirchandani/Adult Education & Counselling Psychology
J. R. Miron/Geography
C. Misak/Philosophy
D. Misgeld/Theory & Policy Studies in Education
A. A. Mitchell/Management
J. Mitchell/Pharmacology
J. X. Mitrovica/Physics
A. Miyake/Psychology
S. W. Mochnacki/Astronomy & Astrophysics
D. Mock/Dentistry
G. Moe/Medical Science
D. E. Moggridge/Economics
J. Mogridge/Laboratory Medicine & Pathobiology
B. Mohanty/Civil Engineering
S. Mojab/Adun Education & Counselling Psychology
M. Mojahedi/Electrical & Computer Engineering
H. Moldofsky/Medical Science
C. Moldoveanu/Management
S. Molloy/Computer Science
E. Molto/Anthropology
J. M. Moncalvo/Botany
A. Monks/Psychology
G. W. K. Moore/Physics
M. J. Moore/Pharmacology
S. Moorthy/Management
G. Moraglia/Psychology
L. A. Moran/Biochemistry
M. Moran/Law
C. Moreau/Mechanical & Industrial Engineering
C. R. Morey/Music
C. L. Morgan/Theory & Policy Studies in Education
K. P. Morgan/Philosophy
M. Morgan/Law
R. J. Morgan/Curriculum, Teaching & Learning
N. E. Morgenstern/English
J. Mori/History
G. K. Morris/Zoology
H. Morris/Chemistry
S. W. Morris/Physics
M. C. Morrison/Philosophy
C. M. Morshead/Medical Science
D. P. Morton/History
M. A. Moscarello/Biochemistry
M. Moscovitch/Psychology
J. Mostaghimi/Mechanical & Industrial Engineering
A. Motsch/French
N. Mrosovsky/Zoology
A. Mullen/Sociology & Equity Studies in Education
A. Mullin/Philosophy
K. Mundy/Adult Education & Counselling Psychology
J. E. Mungall/Geology
L. J . Munk/English
R. E. Munn/Environmental Studies
D. S. Munro/Geography
I. C. Munro/Nutritional Sciences
J. H. A. Munro/Economics
C. Muntaner/Nursing Science
K. Murasugi/Mathematics
B. B. Murdock/Psychology
H. Murialdo/Molecular & Medical Genetics
F. A. Murnaghan/Mathematics
C. M. Murphy/History
R. W. Murphy/Zoology
A. C. Murray/History
H. Murray/English
J. Murray/Medieval Studies
N. W. Murray/Theoretical Astrophysics
R. K. Murray/Bichemistry
V . Murty/Mathematics
N. B. Musisi/History
C. L. Musselman/Human Development & Applied Psychology
C. Mustard/Public Health Sciences
P. M. Muter/Psychology
L. J. Muzzin/Theory & Policy Studies in Education
T. Myers/Public Health Sciences
J. Myles/Sociology
J. Mylopoulos/Computer Science

A. Nabutovsky/Mathematics
A. Nachman/Mathematics
S. Nag/Laboratory Medicine & Pathobiology
S. Nagata/Anthropology
A. Nagel/History of Art
H. Naguib/Mechanical & Industrial Engineering
A. Nagy/Molecular & Medical Genetics
G. Nagy/Curriculum, Teaching & Learning
J. G. Naim/Pharmaceutical Sciences
N. Najm/Electrical & Computer Engineering
H. Najman/Near & Middle Eastern Civilizations
K. Nakajima/East Asian Studies
A. J. Naldrett/Geology

C. Nalewajko/Botany
C. A. Naranjo/Pharmacology
S. Narod/Public Health Sciences
S. Naumann/Biomedical Engineering
C. D. Naylor/Public Health Sciences
J. Ndayiragi/French
R. M. Neal/Statistics
J. R. Nedelsky/Political Science
E. G. Neglia/Spanish
P. Neligan/Medical Science
W. Nelson/History
P. W. Nesselroth/French
C. B. Netterfield/Astronomy & Astrophysics
S. Neuman/English
A. W. Neumann/Mechanical & Industrial Engineering
N. Nevitte/Political Science
R. C. Newmann/Chemical Engineering & Applied Chemistry
M. J. Newton/History
S. M. Neysmith/Social Work
R. Ng/Adult Education & Counselling Psychology
W. T. Ng/Electrical & Computer Engineering
H. Ni/Laboratory Medicine & Pathobiology
G. A. Nicholson/Religion
M . Niemeier/Psychology
M. Nieswandt/Curriculum, Teaching & Learning
E. Nikiema/French
S. Nishisato/Curriculum, Teaching & Learning
W. H. Noble/Medical Science
J. N. Nobrega/Pharmacology
J. Noel/History
J. Nogami/Materials Science & Engineering
G. Norris/Geology
T. H. North/Materials Science & Engineering
L. Northrup/Near & Middle Eastern Civilizations
K. H. Norwich/Physiology
D. Nova/Religion
D. M. Nowlan/Environmental Studies
A. M. Noyek/Public Health Sciences
J . Noyes/German
M. E. Nyquisit/English

K. Oatley/Human Development & Applied Psychology
P. J. O'Brien/Pharmaceutical Sciences
L. O'Brien-Pallas/Nursing Science
H. M. O'Brodovich/Medical Science
P. O'Campo/Public Health Sciences
J. T. O'Connell/Religion
D. L. O'Connor/Nutritional Sciences
K. M. O'Craven/Psychology
D. O'Day/Zoology
P. J. O'Donnell/Physics
B. F. O'dowd/Pharmacology
P. Ohashi/Medical Biophysics
M. Ohh/Laboratory Medicine & Pathobiology
A. Ohlsson/Health Policy, Management & Evaluation
M. Ojha/Biomedical Engineering
B. M. O'Keefe/Speech-Language Pathology
A. B. Okey/Pharmacology
W. A. Oliver/French
N. Oiivieri/Medical Science
M. Olmsted/Medical Science
C. P. Olson/Sociology & Equity Studies in Education
D. R. Olson/Human Development & Applied Psychology
S. Olyan/Social Work
D. A. Ondrack/Management
M. O'Neill-Karch/French
M. J. Opas/Laboratory Medicine & Pathobiology
A. P. M. Orchard/Medieval Studies
I. Orchard/Zoology
R. S. Orr/Physics
B. Orser/Physiology
C. E. Orser, Jr/Anthropology
C. L. Owin/Political Science
D. Orwin/Slavic
L. R. Osborne/Molecular & Medical Genetics
M. Osborne/Economics
V. Ostapchuk/Near & Middle Eastern Civilizations
R. O'Toole/Sociology
C. A. Ottaway/Medical Science
P. Ottensmeyer/Medical Biophysics
J. E. Oxley/Management
H. Ozcelik/Laboratory Medicine & Pathobiology
G. A. Ozin/Chemistry

C. R. Pace-Asciak/Pharmacology
J. A. Packer/Civil Engineering
M. A. Packham/Biochemistry
S. Padro/Theory & Policy Studies in Education
E. F. Pai/Biochemistry
C. J. Paige/Medical Biophysics
R. H. Painter/Biochemistry
C. Y. Pang/Medical Science
K. S. Pang/Pharmaceutical Sciences
T. L. Pangle/Political Science
V. Papangelakis/Chemical Engineering & Applied Chemistry
J. C. Paradi/Chemical Engineering & Applied Chemistry
C. B. Park/Mechanical & Industrial Engineering
J. D. Parker/Medical Science
J. E. K. Parker/Music
M. A. Parker/Music
R. Parker/English
T. Parker/Medical Science
P. C. Parkin/Medical Science
J. Parkinson/Biochemistry
C. Pascal/Theory & Policy Studies in Education
S. Pasupathy/Electrical & Computer Engineering
J. M. Paterson/French
D. Patrick/Music

J. W. O. Patrick/English
L. W. Pauly/Political Science
P. H. Pauly/Management
N. Pavliuc/Slavic
A. J. Pawson/Molecular & Medical Genetics
A. A. Payne/History of Art
J. L. Pearl/History
C. E. Pearson/Molecular & Medical Genetics
B. Peckham/Near & Middle Eastern Civilizations
E. Pedretti/Curriculum, Teaching & Learning
A. W. Peet/Physics
J. Peever/Zoology
Y. P. Pei/Medical Science
J. P. Pelktier/Human Development & Applied Psychology
W. R. Peltier/Physics
U-L. Pen/Theoretical Astrophysics
P. B. Pencharz/Nutritional Sciences
S. G. Penfold/History
G. B. Penn/Computer Science
L. J. Penn/Medical Biophysics
P. Pennefather/Pharmaceutical Sciences
J. L. Penner/Molecular & Medical Genetics
D. J. Penslar/History
A. Percival/Spanish
C. E. Percy/English
J. R. Percy/Astronomy & Astrophysics
M. E. Percy/Physiology
A. T. Perez-Leroux/Spanish
D. D. Perovic/Materials Science & Engineering
P. Perron/French
J. M. Perz/Physim
J . E. Pesando/Economics
E. H. Peter/Nursing Science
J. Peterson/Psychology
S. Peterson/Curriculum, Teaching & Learning
K. M. Peterson-Badali/Human Development & Applied Psychology
T. L. Petit/Psychology
A. Petronis/Medical Science
S . Pfeiffer/Anthropology
K. Phang/Electrical & Computer Engineering
J. R. Phillips/Law
M. J. Phillips/Chemical/ Engineering & Applied Chemistry
M. J. Phillips/Laboratory Medicine & Pathobiology
R. A. Phillips/Medical Biophysics
S. B. Philpott/Anthropology
K. Pichora-Fuller/Psychology
T. Picton/Psychology
L. R. Pierson/Sociology & Equity Studies in Education
A. Pietersma/Near & Middle Eastem Civilizations
D. Pietropaolo/Italian
J.-P. P. Pignol/Medical Biophysics
R. M. Pilliar/Dentistry
G. H. Pink/Public Health Sciences
M. Piquette-Miller/Pharmaceutical Sciences
N. Pkan/Adult Education & Counselling Psychology
T. Pitassi/Computer Science
C. Pitchik/Economics
R. Plant/Drama
K. Plataniiotis/Electrical & Computer Engineering
D. Plewes/Medical Biophysics
P. L. Pliner/Psychology
M. J. Plyley/Exercise Sciences
A. J. Poe/Chemistry
D. Pokorny/Political Science
B. D. Poland/Public Health Sciences
J. C. Polanyi/Chemistry
H. Polatajko-Howell/Occupational Therapy
J. Polivy/Psychology
R. Pomes/Biochemistry
C. V. Ponomareff/Slavic
M. R. Popovic/Biomedical Engineering
E. Poppitz/Physics
J. Portelli/Theory & Policy Studies in Education
M. J. Posner/Mechantcal & Industrial Engineering
M. Post/Physiology
R. M. Post/Physiology
C. X. Poulos/Psychology
P. Poussier/Immunology
J. Powell/Chemistry
R. C. Pratt/Political Science
W. Pratt/Psychology
A. Prentice/Theory & Policy Studies in Education
K. D. Pressnail/Civil Engineering
A. G. Price/Geography
L. C. Priestley/East Asian Studies
D. M. Pringle/Nursing Science
K. P. H. Pritzker/Laboratory Medicine & Pathobiology
G. Prive/Medical Biophysics
S. Prosser/Chemistry
N. Provart/Botany
W. Pnrdham/Geography
J. Prud'homme/Laboratory Medicine & Pathobiology
R. W. Pruessen/History
D. Puga/Economics
M. Pugh/Mathematics
O. L. Pugliese/Italian
D. E. Pulleyblank/Biochemistry
J. T. Purdham/Public Health Sciences
J. Putnam/Law
R. Pysklywec/Geology

S. Quaggin/Medical Science
J. E. QUarter/Adult Education & Counselling Psychology
J. Quastel/Mathematics
A. Quayson/English

M. Rabinovitch/Medical Science
D. L. Raby/History
C. W. Rackoff/Computer Science
I. W. Radforth/History
M. W. Radomski/Exercise Sciences
D. Raffman/Philosophy
J. A. RaftiS/Medieval Studies
S. J. Ralls/Music
M. R. Ralph/Psychology
6. Ramaswami/Materials Science & Engineering
M. L. Rand/Laboratory Medicine & Pathobiology
K. B. Ranger/Mathematics
K. Rankin/Geography
A. V. Rao/Nutritional Sciences
D. Rao/Music
L. Rao/Medical Science
A. Rapoport/Music
A. Rapoport/Psychology
S. Rappolt/Occupational Therapy
M. J. H. Ratcliffe/Immunology
G. Rattan/Philosophy
A. M. Rauth/Medical Biophysics
J. A. Rawlinson/Medical Biophysics
A. K. Ray/Anthropology
P. Ray/Molecular & Medical Genetics
D. M. Rayside/Political Science
S. H. Razack/Sociology & Equity Studies in Education
P. E. Read/Music
S. E. Read/Medical Science
J. Reading/Public Health Sciences
D. G. Reaume/Law
M. F. Redekop/English
D. Redelmeier/Health Policy, Management & Evaluation
J. Reed/Biochemistry
D. W. Reeve/Chemical Engineering & Applied Chemistry
C. Regehr/Social Work
G. Regehr/Theory & Policy Studies m Education
H. A. Regieir/Environmental Studies
J. Rehm/Public Health Sciences
J. H. Reibetan/English
P. A. Reich/Linguistics
D. Reid/History of Art
D. T. Reid/Occupational Therapy
F. J. Reid/Economics
L. D. Reid/Aerospace Science & Engineering
N. Reid/Statistics
S. Reid/Zoology
J. A. Reilly/Near & Middle Eastern Civilizations
R. M. Reilly/Pharmaceutical Sciences
E. M. Reingold/Psychology
M. Reis/Laboratory Medicine & Pathobiology
R. R. Reisz/Zoology
R. A. Reithmeier/Biochemistry
J. G. Reitz/Sociology
E. C. Relph/Geography
G, Remington/Medical Science
R. S. Remis/Public Health Sciences
R. M. Renwick/Occupational Therapy
J. S. Repka/Mathematics
D. P. Restuccia/Economics
J. N. Retaliack/History
A. R. Reuber/Management
E. J. Revell/Near & Middle Eastern Civilizations
J. L. Reynolds/Music
R. E. Reynolds/Medieval Studies
W. Reynolds/Chemistry
R. K. Reznick/Medical Science
K. D. Rice/Linguistics
L. Richards/Architecture, Landscape, & Design
R. Richards/Medical Science
C. Richardson/Medical Biophysics
D. S. Richardson/History of Art
G. P. Richardson/Religion
D. S. Riddick/Pharamacology
A. G. Rigg/Medieval Studies
C. D. Riggs/Botany
M. Ringuette/Zooology
J. M. Rini/Molecular & Medical Genetics
A. S. Ripstein/Law
J. D. Rising/Zoology
J. M. Rist/Classics
V. M. Ristic/Electrical & Computer Engineering
K. W. Roach/Law
E. I. Robbins/classics
Y. Roberge/French
J. K. Roberts/Economics
A. Robertson/Public Health Sciences
I. R. Robertson/History
J. Robertson/Laboratory Medicine & Pathobiology
P. Y. Robin/Geology
W. R. Robins/English
B. H. Robinson/Biochemistry
J. B. Robinson/Pharmaceutical Sciences
T. M. Robinson/Philosophy
V. Robinson/Geography
A. Robson/History
E. A. Rochon/Speech-Language Pathology
P. Rochon/Health Policy, Management & Evaluation
S. Rockel/History
K. Rockhill/Sociology & Equity Studies in Education
F. H. Rodd/Zoology
J. C. C. Roder/Immunology
C. D. Rodgers/Exercise Sciences
G, M. Rodin/Medical Science
H. E. Rogers/Linguistics
J. S. Rogers/Mechanical & Industrial Engineering
C. J. Rogerson/Law
T. E. Rohan/Public Health Sciences
C. Roifman/Immunology

O. M. Rojinsky/Spanish
N. C. Rolheiser/Curriculum, Teaching & Learning
W. L. Rolph/Spanish
S. Rolston/Music
M. K. Romach/Medical Science
R. Roman/Sociology
P. Romans/Zoology
S. Romans/Medical Science
J. M. Rommens/Molecular & Medical Genetics
P. G. Rooney/Mathematics
D. S. Rootman/Medical Science
I. Rootman/Public Health Sciences
B. I. Roots/Zoology
D. Rose/Medical Biophysics
J. S. Rose/Electrical & Computer Engineering
M. W. Rosenberg/History & Philosophy of Science & Technology
N. D. Rosenblum/Medical Science
C. Rosenthal/Public Health Sciences
J. Rosenthal/Statistics
P. Rosenthal/Mathematics
J. A. Ross/Curriculum, Teaching & Learning
R. B. Ross/Dentistry
J. Rossant/Molecular & Medical Genetics
W. Rosser/Public Health Sciences
A. Rossos/History
W. Rotenberg/Management
A. I. Rothman/Theory & Policy Studies in Education
D. Rotin/Biochemistry
A. Rotstein/Political Science
O. D. Rotstein/Medical Science
R. Rottapel/Immunology
M. Rotundo/Management
S. B. Rourke/Medical Science
J. Rovet/Human Development & Applied Psychology
O. J. Rowe/Physics
L. Rowe/Zoology
S. T. Roweis/Geography
S. T. Roweis/Cornputer Science
O. Rowe-Magnus/Laboratory Medicine & Pathobiology
J. A. Rowlands/Medical Biophysics
T. J. Rowley/Management
D. N. Roy/Forestry
E. Roy/Rehabilitiation Science
P. J. Roy/Molecular & Medical Genetics
M . Rozakis-Adcock/Laboratory Medicine & Pathobiology
M. Rozemond/Philosophy
B. Rubin/Medical Science
L. A. Rubin/Medical Science
C. I. Rubincam/Classics
A. Rubinoff/Potical Science
S. M. Rucinski/Astronomy & Astrophysics
J. C. Rucklidge/Geology
H. E. Ruda/Materials Science & Engineering
D. T. Ruddel/Museum Studies
S. RUddick/Geography
E. Rummel/Medieval Studies
S. J. Rupp/Spanish
B. Rush/Public Health Sciences
P. W. Russell/Political Science
P. Rutherford/History
J. T. Rutka/Laboratory Medicine & Pathobiology
J. W. Rutter/Materials Science & Engineering
J. Ryan/Psychology
J. J. Ryan/Theory & Policy Studies in Education

J. Sadavoy/Medical Science
A. Saddlemyer/English
P. D. Sadowski/Molecular & Medical Genetics
A. E. Safain/Management
L. Safran/History of Art
R. F. Sage/Botany
T. L. Sage/Botany
M. Sain/Forestry
J. A. Saint-Cyr/Medical Science
A. Sakaki/East Asian Studies
I. Sakinofsky/Public Health Sciences
A. M. Saks/Management
J . W. Salaff/Sociology
C. A. Salama/Electrical & Computer Engineering
I. E. Salit/Medical Science
L. Salter/History & Philosophy of Science & Technology
M. W. Salter/Physiology
R. B. Salter/Medical Science
W. J. Samarin/Anthroplogy
S. M. Sandahl/East Asian Studies
K. R. Sandbrook/Political Science
G. Sanders/East Asian Studies
R. Sandler/Near & Middle Eastern Civilizations
P. Sandori/Architecture, Landscape, & Design
J. P. Santerre/Dentistry
J. Sapp/History & Philosophy of Science & Technology
R. M. Sarabia/Spanish
E. Sargent/Electrical & Computer Engineering
B. Sarkar/Biochemistry
A. M. Sass-Kortsak/Public Health Sciences
R. Sauve/Mechanical & Industrial Engineering
P. E. Savard/Physics
B. A. Saville/Chemical Engineering & Applied Chemistry
B. J. Saville/Botany
J. Savona/French
R. M. Savory/Near & Middle Eastern Civilizations
L. A. Sawchuk/Anthropology
J. A. Sawyer/Policy Analysis
M. L. Scardamalia/Curriculum, Teaching & Learning
G. Scavizzi/History of Art
R. J. Schachar/Human Development & Applied Psychology
H. Schachter/Biochemistry

J. Schallert/Savic
G. E. G. Schellenberg/Psychology
H. Schemitsch/Medical Science
S. W. Scherer/Molecular & Medical Genetics
J. Scherk/Mathematics
B. B. Schiff/Psychology
U. Schimmack/Psychology
B. P. Schimmer/Pharmacology
W. A. Schlepp/East Asian Studies
B. Schlesinger/Social Work
L. C. Schlichter/Physiology
A. Schmid/East Asian Studies
L. E. Schmidt/Religion
M. Schmuckler/Psychology
B. A. Schneider/Psychology
M. S. Schneider/Adult Education & Counselling Psychology
D. Schneiderman/Law
M. S. Schofield/Chemistry
G. D. Scholes/Chemistry
J. Scholoey/Medical Science
D. Schugurensky/Adult Education & Counselling Psychology
A. C. Schuh/Medical Science
D. Schulze/Geology
D. V. Schwartz/Political Science
W. M. Schwerdtner/Geology
S. D. Scott/Geology
W. E. Seager/Philosophy
E. R. Seaquist/Astronomy & Astrophysics
W. Seccombe/Sociology & Equity Studies in Education
L. A. Seco/Mathematics
S. Sedivy/Philosophy
A. S. Sedra/Electrical & Computer Engineering
M. Seeman/Medical Science
P. Seeman/Pharmacology
M. V. Sefton/Chemical Engineering & Applied Chemistry
H. Segal/Pharmaceutical Sciences
J. Segall/Biochemistry
K. A. Selby/Civil Engineering
P. Selick/Mathematics
H. Seliger/German
D. W. Selien/Anthropology
E. M. Sellers//Pharmacology
Y. Seltzer/Dentistry
Y. Semenov/Mathematics
A. Semlyen/Electrical& Computer Engineering
J. L. Semple/Medical Science
J. W. Semple/Pharmacology
D. K. Sen/Mathematics
J. W. Senders/Mechanical & Industrial Engineering
B. J. Sessie/Dentistry
A. Seth/Laboratory Medicine & Pathobiology
K. C. Sevcik/Computer Science
A. Sev'er/Sociology
P. L. Seyfried/Molecular & Medical Genetics
M. Shaffer/Law
C. P. Shah/Public Health Sciences
A. S. Shalaby/Civil Engineering
P. M. M. Shand/Music
H. S. Shannon/Public Health Sciences
B. Z. Shapiro/Social Work
C. Shapiro/Medical Science
J. A. Sharpe/Medical Science
R. W. Sharpe/Mathematics
B. F. Shaw/Medical Science
J. W. Shaw//History of Art
M. C. Shaw/History of Art
P. Shaw/Laboratory Medicine & Pathobiology
W. D. Shaw/English
N. H. Shear/Pharmacology
C. O. Shearing/Political Science
S. A. Sheikh/Civil Engineering
A. Sheikholeslami/Electrical & Computer Engineering
B-Z. Shek/French
P. N. Shek/Laboratory Medicine & Pathoblology
V. T. Shen/Philosophy
R. J. Shephard/Exercise Sciences
T. G. Shepherd/Physics
A. N. Sheps/History
W. Shera/Social Work
M. D. Sherar/Medical Biophysics
F. A. Sherk/Mathematics
I. A. Sherman/Physiology
P. Sherman/Medical Science
B. Shewood Lollar/Geology
S. J. Shettleworth/Psychology
M. Shi/Management
S. Shi/Economics
J. Shin/Chemistry
R. W. Shirley/Anthropology
M. S. Shoichet/Chemical Engineering & Applied Chemistry
E. L. Shorter/History
H. L. Shu/Mechanical & lndustrial Engineering
M. I. Shub/Mathematics
M. J. Shulman/lmmunology
K.-L. Shun/Religion
F. Sicheri/Molecular & Medical Genetics
S. Sidani/Nursing Science
J. Sidnell/Anthropology
M. Sidnell/English
R. Siebelhoff/History of Art
K. Sieciechowicz/Anthropology
I. M. Sigai/Mathematics
B. A. Sigmon/Anthropology
G. Silano/History
P. Silcox/Political Science
E. T. Silva/Sociology
A. I. Siiver/History

B. S. Silverman/Management
E. D. SiIverman/lmmunology
F. S. Silverman/Medical Science
M. Silverman/Medical Science
R. J. Silvers/Curriculum, Teaching & Learning
R. Simeon/Political Science
K. A. Siminovitch/lmmunology
L. Siminovitch/Molecular & Medical Genetics
c. Simmons/Mechanical & Industrial Engineering
J. Simmons/Geography
J. W. Simmons/Geography
R. I. Simon/Sociology & Equity Studies in Education
A. Simpson/Chemistry
J. H. Simpson/Sociology
M. Simpson/Geography
A. N. Sinclair/Mechanical & Industrial Engineering
P. K. Sinervo/Physics
P. A. Singer/Medical Science
K. Singh/Computer Science
E. Single/Sociology
R. E. Sinkewicz/Medieval Studies
A. Siow/Economics
J. E. Sipe/Physics
J. P. Sislian/Aerospace Science & Engineering
C. H. Siu/Biochemistry
F. K. Skinner/Physiology
H. A. Skinner/Public Health Sciences
G. D. Skogstad/Political Science
M. L. Skolnik/Theory & Policy Studies in Education
R. Skyrme/Spanish
B. E. Sleep/Civil Engineering
G. R. Slemon/Electrical & Computer Engineering
J. M. Slingerland/Medical Biophysics
J. Slotta/Curriculum, Teaching & Learning
A. S. Slutsky/Medical Science
M. Smart/Economics
C. A. Smibert/Biochemistry
W. J. Smieliauskas/Management
8. C. Smith/lnformation Studies
C. T. Smith/Forestry
D. Smith/Anthropology
D. E. Smith/Sociology & Equity Studies in Education
D. W. Smith/French
J. J. B. Smith/Zoology
M. C. Smith/Psychology
M. L. Smith/Psychology
P. W. Smith/Electrical & Computer Engineering
S. H. Smith/Mathematics
S. M. Smith/Forestry
D. Smyth/History
E. M. Smyth/Curriculum, Teaching & Learning
R. H. Smyth/Linguistics
O. C. Snead III/Medical Science
J. H. Sobel/Philosophy
R. M. Soberman/Civil Engineering
J. Sodek/Dentistry
P. L. Sohm/History of Art
M. Sokolowski/Zoology
M. J. Sole/Medical Science
S. Z. Solecki/English
P. H. Solomon/Political Science
S. So/omon/Political Science
D. Soman/Management
L. Somigli/Italian
I. D. Sommerville/Materials Science & Engineering
D. Song/Chemistry
J. Song/East Asian Studies
A. Sorensen/Geography
A. Sorenson/Sociology
L. Sossin/Law
E. S. Sousa/Electrical & Computer Engineering
N. Spada/Curriculum, Teaching & Learning
J. K. SpeIt/Mechanical & Industrial Engineering
A. Spence/Molecular & Medical Genetics
I. Spence/Psychology
M. W. Spencer/Sociology
P. Sperdakos/Drama
L. Spero/Pharmacology
M. Spino/Phamaceutical Sciences
E. T. C. Spooner/Geology
W. G. Sprules/Zoology
P. A. Square/Speech-Language Pathology
J. A. Squire/Laboratory Medicine & Pathobiology
G. Sreenivasan/Philosophy
G. Srinivasan/Geology
S. Srinivasan/Laboratory Medicine & Pathoblology
M. S. Srivasta/Statistics
S. J. St.John/Music
M. Stabile/Economics
J. Stafford/Public Health Sciences
V. Stambolic/Medical Biophysics
A. Stanbridge/Museum Studies
W. L. Stanford/Biomedical Engineering
P. C. Stangeby/Aerospace Science & Engineering
G. J. Stanisz/Medical Biophysics
E. F. Stanley/Physiology
P. J. Stanovich/Curriculum. Teaching & Leaming
A. Stark/Management
I. L. Stefanovic/Philosophy
J. Stein/Political Science
M. J. Steinbach/Medical Science
A. M. Steinberg/Physics
G. Steiner/Physiology
B. Steipe/Biochemistry
R. Stephenson/Zoology
L. E. Stermac/Adult Education & Counselling Psychology
B. Stern/Social Work
R. Sternberg/Spanish
G. N. Steuart/Civil Engineering

B. Stevens/Nursing Science
P. A. Stevens/English
S. A. Stevenson/Computer Science
A. K. Stewart/Medical Science
B. A. Stewart/Zoology
D. E. Stewart/Medical Science
D. J. Stewart/Medical Science
H. C. Stewart/Law
P. A. Stewart/Anatomy & Cell Biology
I. W. Still/Chemistry
J. A. Stinson/Architecture, Landscape, & Design
B. C. A. Stock/English
W. C. Strange/Management
N. A. Straus/Botany
B. H. Strauss/Laboratory Medicine & Pathobiology
D. L. Streiner/Medical Science
R. E. Stren/Political Science
K. Strong/Physics
S. C. Strother/Medical Biophysics
T. A. Stukel/Health Policy, Management & Evaluation
M. Stumm/Electrical & Computer Engineering
D. T. Stuss/Psychology
M. E. Subtelny/Near & Middle Eastern Civilizations
c. Sulem/Mathematics
E. v. Sullivan/Adult Education & Counselling Psychology
P. A. Sullivan/Aerospace Science & Engineering
P. E. Sullivan/Mechanical & Industrial Engineering
R. Sullivan/English
L. W. Summer/Philosophy
Y. Sun/Mechanical & Industrial Engineering
J. C. Susini/French
J. Svoboda/Botany
M. K. Swain/Curriculum, Teaching & Learning
R. F. Sweet/Near & Middle Eastem Civilizations
R. Sweetman/Religion
N. B. Sweezey/Medical Science
E. V. Swenson/Computer Science

R. W. Tafarodi/Psychology
S. Tagliamonte/Linguistics
F. O. Tall/Mathematics
J. Tanner/Sociology
I. F. Tannock/Health Policy, Management & Evaluation
R. Tannock/Human Development & Applied Psychology
S. M. Tanny/Mathematics
A. K. Tanswell/Medical Science
V. S. Tarasuk/Nutritional Sciences
S. M. Tado/Medical Science
M. D. Tarnawsky/Slavic
C. H. Tator/Medical Science
M. Tavakoli-Targhi/Near & Middle Eastem Civilizations
I. M. Taylor/Anatomy & Cell Biology
J. Taylor/Sociology
J. G. Taylor/Religion
R. Taylor/French
J. L. Teather/Museum Studies
J. A. Teichman/Political Science
R. Tellier/Laboratory Medicine & Pathobiology
D. M. Templeton/Laboratoty Medicine & Pathobiology
N. T. Ten Kodenaar/English
H. C. Tenenbaum/Dentistry
S. Tenenbaum/Philosophy
R. C. Tennyson/Aerospace Science & Engineering
U. Tepass/Zoology
L. J. Tepperman/Sociology
C. N. Terpstra/History
D. Terzopoulos/Computer Science
D. Thiessen/Curriculum, Teaching & Learning
J. J. Thiessen/Pharmaceutical Sciences
A. Thomas/Adult Education & Counselling Psychology
S. C. Thomas/Forestry
S. G. Thomas/Exercise Sciences
A. C. Thompson/Theoretical Astrophysics
J. C. Thompson/Chemistry
L. Thompson/Nutritional Sciences
M. Thompson/Chemistry
M. A. Thompson/Molecular & Medical Genetics
P. A. Thompson/Medieval Studies
R. P. Thompson/History & Philosophy of Science & Technology
W. Thompson/Psychology
H. L. Thompson/English
J. D. Thomson/Zoology
M. J. Thomson/Mechanical & Industrial Engineering
R. D. Thomson/Slavic
P. Thorner/Laboratory Medicine & Pathobiology
J. Thorpe/Materials Science & Engineering
J. H. Thywissen/Physics
R. G. Tiberius/Theory & Policy Studies in Education
T. T. Tidwell/Chemistry
P. F. Tikuisis/Exercise Sciences
J. E. Till/Medical Biophysics
V. R. Timmer/Forestry
J. Timus/Civil Engineering
T. To/Public Health Sciences
S. S. Tobe/Zoology
B. Todd/History
S. Todorcevic/Mathematics
C. Tolton/French
M. Tombak/Management
G. Tomlinson/Public Health Sciences
B. Toner/Medical Science
S. Toueg/Computer Science
A. Tourangeau/Nursing Science
D. R. Townsend/Medieval Studies
R. G. Townsend/Theory & Policy Studies in Education
J. Trachtenberg/Medical Science
J. Trail/Classics
H. N. Tran/Chemical Engineering & Applied Chemistry

N. T. Tran/History
J. Tranmer/Nursing Science
O. Trass/Chemical Engineering & Applied Chemistry
R. E. Traub/Curriculum, Teaching & Learning
M. J. Trebilcock/Law
D. Trefler/Management
S. E. Trehub/Psychology
P. Trifonas/Curricuium, Teaching & Learning
W. S. Trimble/Biochemistry
W. Trischuk/Physics
O. Tritchler/Medical Biophysics
N. Trocme/Social work
T. Trojanowska/Slavic
G. E. Trope/Medical Science
V. Tropepe/Zoology
H. M. Troper/Theory & Policy Studies in Education
A. Trotz/Sociology & Equity Studies in Education
K. T. Tsang/Social Work
M. S. Tsao/Laboratory Medicine & Pathobiology
J. K. Tsotsos/Computer Science
F. W. Tsui/Immunology
L. C. Tsui/Molecular & Medical Genetics
R. Tsukimura/East Asian Studies
R. G. Tsushima/Physiology
J. Tu/Health Policy, Management & Evaluation
E. Tulving/Psychology
C. J. Tuohy/Political Science
I. B. Turksen/Mechanical & Industrial Engineering
D. H. Turner/Anthropology
F. Turner/Social Work
M. A. Turner/Economics
D. B Tweed/Physiology
M. D. Tyers/Molecular & Medical Genetics
M. T. Tymianski/Medical Science
R. F. Tyndale/Pharmacology

J. P. Uetrecht/Pharmaceutical Sciences
S. B Ungar/Sociology
M. B. Urowitz/Medical Science
A. I. Urquhart/Philosophy
T. A. Utigard/Materials Science & Engineering
S. Uyenaka/East Asian Studies

L. Vaage/Religion
F. J. Vaccarino/Psychology
M. Vachon/Public Health Sciences
K. B. Vahamaki/Savic
S. Valaee/Electrical & Computer Engineering
C. Valcke/Law
M. J. Valdes/Comparative Literature
J. P. Valleau/Chemistry
K. A. Vallis/Medical Biophysics
M. V. Valverde/Criminology
J. Van De Vegte/Mechanical & Industrial Engineering
D. J. Van Der Kooy/Molecular & Medical Genetics
T. E. Van Deventer/Electrical & Computer Engineering
H. M. Van Driel/Physics
B. L. van Ginkel/Architectiure, Landscape, & Design
M. H. van Kerkwij/Astronomy & Astrophysics
S. M. Van Kirk/History
P. H. H. van Lieshout/Speech-Language Pathology
H. M. Van Tol/Pharmacology
W. H. Vanderburg/Civil Engineering
R. M. Vanderburgh/Anthropology
G. C. Vanlerberghe/Botany
S. L. Varmuza/Zoology
E. Vayda/Health Policy, Management & Evaluation
F. J. Vecchio/Civil Engineering
R. Veith/Nutritional Sciences
A. Veneris/Electrical & Computer Engineering
A. N. Venetsanopoulos/Electrical & Computer Engineering
R. D. Venter/Mechanical & Industrial Engineering
A. Verma/Management
M. Verrier/Physical Therapy
J. M. Vertin/Philosophy
J. Veugelers/Sociology
E. P. Vicari/English
J. J. Vicente/Mechanical & Industrial Engineering
R. W. Vieth/Laboratory Medicine & Pathobiology
B. Vigil Laden/Theory & Policy Studies in Education
D. W. Vincent/German
L. A. Viola/History
R. C. Vipond/Political Science
B. Virág/Statistics
C. Virag/East Asian Studies
C. W. Visser/English
A. Vitkin/Medical Biophysics
W. F. Vogel/laboratory Medicine & Pathobiology
A. VoIchuk/Biochemistry
R. J. Volpe/Human Development & Applied Psychology
P. H. Von Bitter/Geology
M. Voss/Electrical & Computer Engineering
Z. G. Vranesic/Electrical & Computer Engineering
M. Vranic/Physiology
V. Vuksan/Nutritional Sciences

S. M. Waddams/Law
T. K. Waddell/Medical Science
N. K. Wagle/History
M. W. Wahlstrom/Curriculum, Teaching & Learning
R. W. Wald/Medical Science
B. Walfish/Religion
A. Walker/Chemistry
G. Walker/Chemistry
J. A. Walker/French
M. B. Walker/Physics
A. M. Wall/Psychology
J. S. Wallace/Mechanical & Industrial Engineering
M. B. Wallace/Classics

M. C. Wa!lace/Medical Science
S. Wallace/Chemistry
D. Wa/sh/Philosophy
C. K. Walter/Music
G. C. Walters/Psychology
c. Wang/Laboratory Medicine & Pathobiology
E. Wang/Health Policy, Management & Evaluation
L. Y. Wang/Physiology
P. Y. Wang/Biomedical Engineering
Z. Wang/Materials Science & Engineering
F. Wania/Chemistry
C. A. Ward/Mechanical & Industrial Engineering
M. Ward/Medical Science
W. E. Ward/Nutritional Sciences
W. K. Wark/History
G. Warkentin/English
J. J. Warsh/Medical Science
D. Wasylenki/Health Policy, Management & Evaluation
D. B. Waterhouse/East Asian Studies
M. H. Watkins/Political Science
A. M. Watson/Economics
J. C. Watson/Adult Education & Counselling Psychology
T. H. Watts/Immunology
J , H . Watt-Watson/Nursing Science
M. S. Wayne/History
J. R. Webster/Spanish
J. H. Wedge/Medical Science
J. Y. T. Wei/Physics
Z. Wei/Management
A. S. Weinrib/Law
E. J. Weinrib/Law
L. E. Weinrib/Law
R. D. Weisel/Medical Science
K. A. Weisman/English
J. Weiss/Curriculum, Teaching & Learning
W. A. Weiss/Mathematics
R. Weksberg/Medical Science
D. A. Welch/Political Science
B. S. Wellman/Sociology
D. L. Wells/Life Course & Aging
J. W. WeIIs/Pharmaceutical Sciences
L. Wells/Social Work
P. G. WeIIs/Pharmaceutical Sciences
S. WeIsh/Sociology
K. P. Wensley/Management
G. F. West/Physics
L. West/Medical Science
C. Westall/Medical Science
D. A. Westaway/Laboratory Medicine & Pathobiology
J. A. Westgate/Geology
J. T. Westwood/Zoology
H. E. Wetzel/German
J. W. Wevers/Near & Middle Eastern Civilizations
B. Wheaton/Sociology
M. B. Wheeler/Physiology
W. M. Whelan/Medical Biophysics
J. R. Wherrett/Medical Science
A. D. White/Management
G. White/Political Science
R. R. White/Geography
C.I. Whiteside/Medical Science
J. E. Whiting/Philosophy
G. F. Whitmore/Medical Biophysics
J. B. Whitney/Geography
S. G. Whittington/Chemistry
G. R. Whyte/Management
G. M. Wickens/Near & Middle Eastern Civilizations
F. J. Wicks/Geology
J. R. Wiener/Human Development & Applied Psychology
B. T. Wigdor/Psychology
A. R. Wilde/Molecular & Medical Genetics
M. J. Wiley/Medical Science
J. A. Wilkinson/Curriculum, Teaching & Learning
G. T. Will/Civil Engineering
A. R. Willan/Public Health Sciences
A. P. Williams/Health Policy, Management & Evaluation
O. B. Williams/Biochemistry
D. D. Williams/Zoology
D. E. Williams/History
G. R. Williams/Biochemistry
J. I. Williams/Public Health Sciences
J. P. Williams/Botany
M. S. Williams/Political Science
R. L. Williams/Materials Science & Engineering
N. J. Williamson/Information Studies
D. M. Willows/Human Development & Applied Psychology
B Wilson/Medical Biophysics
O. A. Wilson/History
D. N. Wilson/Curriculum, Teaching & Learning
F. F. Wilson/Philosophy
G. Wilson/Physiology
G. J. Wilson/Laboratory Medicine & Pathobiology
I. E. Wilson/Information Studies
K. Wilson/Planning
T. A. Wilson/Economics
R. Winklbauer/Zoology
M. A. Winnik/Chemistry
G. Winocur/Psychology
M. P. Winsor/History & Philosophy of Science & Technology
F. E. Winter/History of Art
R. Winterbottom/Zoology
N. Wiseman/Political Science
J. E. Wither/Immunology
R. Wittmann/History
C. Wittnich/Medical Science
S. Wodak/Biochemistry
J. M. Wojtowicz/Physiology
T. M. Wolever/Nutritional Sciences

D. A. Wolfe/Political Science
J. T. Wottesen/History of Art
C. S. Wong/Medical Biophysics
P. Wong/Laboratory Medicine & Pathobiology
S. S. Wong/Physics
w. Wong/Electrical & Computer Engineering
W. M. Wonham/Electrical & Computer Engineering
M. Wood/Medical Biophysics
J. Woodgettt/Medical Biophysics
K. Wodhouse/Chemical Engineering & Applied Chemistry
M. Woodin/Zoology
E. Woodruff/Human Development & Applied Psychology
D. B. Woodside/Medical Science
D. G. Woodside/Dentistry
T. R. Wooldridge/French
G. A. Woolley/Chemistry
N. S. Wortley/Criminology
D. B. Wortman/Computer Science
U. G. Wortman/Geology
J. L. Wrana/Molecular & Medical Genetics
G. A. Wright/Medical Biophysics
G. R. Wright/Public Health Sciences
J. G. Wright/Health Policy, Management & Evaluation
P. J. Wrobel/History
G. E. Wu/Immunology
X. Y . Wu/Phamaceutical Sciences
Y. W. Wu/Astronomy & Astrophysics
J. S. Wunder/Medical Science

J. Xie/Management

M. J. Yaffe/Medical Biophysics
M. Yampolsky/Mathematics
N. Yan/Forestry
B. Y. Yang/Laboratory Medicine & Pathobiology
A. J. Yatchew/Economics
T. M. Yau/Medical Science
H. K. C. Yee/Astronomy & Astrophysics
H. Yeger/Laboratory Medicine & Pathobiology
W. C. Yeh/Medical Biophysics
E. L. Yeo/Medical Science
J. S. Yeomans/Psychology
C. C. Yip/Physiology
C. M. Yip/Chemical Engineering & Applied Chemistry
D. York/Physics
K. K. Yoshida/Physical Therapy
K. Yoshioka/Botany
K. Young/Public Health Sciences
L. T. Young/Hea\th Policy, Management & Evaluation
N. Young/Physical Therapy
R. P. Young/Civil Engineering
T. C. Young (Jr)/Near & Middle Eastern Civilizations
J. H. Youson/Zoology
E. Yu/lnformation Studies
X. M. Yu/Dentistry
Y. Yucel/Laboratory Medicine & Pathobiology
K. Yudin/Chemistry

E. Zacksenhaus/Medical Biophysics
D. Zakus/Nursing Science
S. G. Zaky/Electrical & Computer Engineering
K. Zakzanis/Psychology
D. Zamble/Chemistry
N. Zamel/Medical Science
P. Zandstra/Biomedical Engineering
B Zanke/Medical Science
G. A. Zarb/Dentistry
R. E. Zee/Aerospace Science & Engineering
I. M. Zeitlin/Sociology
G. Zekulin/Siavic
P. Zelazo/Psychology
S. Zeller/History & Philosophy of Science & Technology
R. Zemel/Computer Science
L. Zhang/Laboratory Medicine & Pathobiology
L. Zhang/Medical Science
P. Zhang/Management
Z. Zhang/Molecular & Medical Genetics
M. Zhen/Molecular & Medical Genetics
X. Zhu/Economcs
M. Zhuo/Physiology
M. Zielenska/Laboratory Medicine & Pathobiology
J. Zilcosky/German
A. P. Zimmerman/Zoology
J. Zine/Sociology & Equity Studies in Education
D. W. Zingg/Aerospace Science & Engineering
B. Zinman/Medical Science
R. B. Zipursky/Medical Science
S. Zlotkin/Nutritionai Sciences
J. Zu/Mechanical & Industrial Engineering
E. Zubrow/Anthropology
K. J. Zucker/Psychology
M. Zuker/Theory & Policy Studies in Education
S. Zukotynski/Electrical & Computer Engineering
J. C. Zuniga-Pflucker/lmmunology

8

Graduate Programs

This section contains an alphabetical listing of all the graduate programs offered by the School of Graduate Studies at the University of Toronto. SGS comprises over 80 graduate units (departments, centres, and institutes) offering approximately 150 programs.

Each graduate unit's offerings are described in a separate entry containing information about that unit's graduate faculty, admission requirements, program requirements, courses of instruction, contact information, and a Web site where you may visit for more details.

Addiction Studies (Collaborative Program)

Program Committee

L. E. Stermac, BSc, MA, PhD/Adult Education & Counselling Psychology
R. Frecker, BSc, MD, PhD, LMCC/Biomedical Engineering
N. S. Wortley, BA, MA, PhD/Criminology
W. M. Duff, BA, MLS, PhD/Information Studies
P. L. Carlen, MD, FRCP(C)/Medical Science
B. A. Sproule, BScPhm, PharmD/Pharmaceutical Sciences
J. A. Cunningham, BSc MA, PhD/Psychology
R. E. Mann, BA, MASc, PhD/Public Health Sciences
J. Rehm, PhD/Public Health Sciences (Director)
M. Herie, BA, MSW, PhD/Social Work
P. G. Erickson, BA MA, PhD/Sociology

Address:
J. T. Rehm, Director
Collaborative Program in Addiction Studies
Centre for Addiction and Mental Health
33 Russell Street, Room 2035
Toronto, Ontario
Canada M5S 2S1

Telephone: (416) 535-8501 ext. 6907
E-mail: jtrehm@ aol.com
Web: www.phs.utoronto.ca/c−copas.htm

The graduate units of Adult Education and Counselling Psychology; Anthropology; Biomedical Engineering; Criminology; Information Studies; Medical Science; Pharmaceutical Sciences; Pharmacology; Psychology; Public Health Sciences; Social Work; and Sociology, 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 Ph.D. programs are included. Candidates 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

All master's students in the collaborative program are required to take PAS 3700H *Multidisciplinary Aspects of Addictions,* plus a half-year course selected from the list of approved courses presented below or an approved directed reading course.

Ph.D. candidates in the collaborative program are required to take PAS 3700H *Multidisciplinary Aspects of Addictions,* if they have not already done so, plus one additional half-year course (not taken previously) from the approved listing of courses presented below or an approved directed reading course.

In addition, students in the collaborative program must meet all requirements of their home department in terms of course work and thesis work, or equivalent. For both the thesis master's and doctoral degrees, 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 half-course 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 of Instruction

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/J. Rehm, R. Mann
PAS 3701H	Advanced Research Issues in Addictions/R. Mann, P. Erickson
CHL 5119H	Social and Political Perspectives on Drugs and Addictions/ B. Fischer
CHL 5417H	Tobacco and Health: From Cells to Society/R. G. Ferrence, J. Cohen
JPM 1005Y	Behavioural Pharmacology/D.M. Tomkins, Staff
MSC 1085H	Molecular Approaches to Mental Health and Addictions/ J. Kennedy
PSY 2703H	The Psychology of Addictions/ J. Cunningham
SOC 6123H	Sociology of Addiction//P.G. Erickson
SWK 4616H	Drug Dependence: Treatment Approached W. Skinner, Staff

Adult Education and Counselling Psychology AEC

Graduate Faculty

Full Members

E. M. Antone, BA, BEd, MEd, EdD
B. Burstow, BA, MA, MEd, PhD
c. Chen, BA, MEd, MA, PhD
A. L. Cole, BA, BEd, MEd, MEd, EdD
J. R. Gillis, BSc, MA, PhD
M. A. Guttman, BEd, MSc, PhD
B. L. Hall
N. Jackson, BA, MA, PhD
G. Knowles, BA, MS, PhD
M. E. Laiken, BA, MA, PhD
D. W. Livingstone, BA, PhD
A. R. Miles, BA, MA, PhD
K. Mirchandani, BA, MA, PhD
S. Mojab, MEd, PhD
K. Mundy, BA, MA, PhD, Canada Research Chair
R. Ng, BA, MA, PhD
N. Piran, BA, PhD
J. E. Quarter, BA, MA, PhD (Associate Chair)
M. S. Schneider, BA, MA, PhD
D. Schugurensky, BEd, MEd, PhD
L. E. Stermac, BSc, MA, PhD (Chair)
R. J. Volpe, BA, MA, PhD
J. c. Watson, BA, MA, PhD

Members Emeriti

P. J. Gamlin, BA, MA, PhD
D. Hunt, BS, MA, PhD
S. A. Miezitis, BA, MA, PhD, CPsych
E. V. Sullivan, Professor Emeritus
A. Thomas, BA, MA, PhD

Associate Members

D. Abbey-Livingston, BA, MEd
J. Abracen
R. Blanchard, BA, MA, PhD
D. Brecher, BA, MA, EdD
C. Campbell, MBA, EdD
I. Carmichael, MA, MEd, PhD
C. M. A. Courbasson, BA, MA, PhD
A. Cummings, BM, BA, MEd, MA, PhD
R. Dale, BA, PGCE, PhD
G. Daly
D. M. Day, BA, MA, PhD
D. Denton
R. Duck, BA, MA, MEd, PhD
G. Ewing, AB, BEd, MA, PhD
A. Facio, MCJ, LLD
L. Ferguson
M. Fisher, BA, MEd, EdD
A. Goodman. BSc, MEd, PhD
A. Grace, BSc, BEd, MEd, PhD
D. Grocke, BM, MM, PhD
N. Halpern, PEng, MEd, EdD
M. Hamilton, BA, PhD
J. Horsman, BA, MEd, EdD
A. Isla, BA, MA, PhD
K. R. Jasper, MEd, MA, PhD
L. Jeffrey
N. Josefowitz, BA, MSc, PhD
C. Langton
L. Leduc, BA, MA, PhD
U. Leviatan, BA, MA, PhD
C. Mackenzie
D. Martin, BA, MA, EdD
H. Mayer, BA, MEd, PhD
M. Mclntyre, BA, MEd, EdD
R. Mclean, BA, MEd, EdD
E. Meade, BA, MEd, EdD
S. Minsky, BSc, MA, PhD
R. Moodley, BPhil, MPhil, PhD
S. Myers, BEd, BA, MEd, EdD
M. Norton, BA, MLS, PhD
B. Richmond, BA, MES, PhD
M. Rogers
A. B. Rossiter, BM, MSW, EdD
I. Sajor, BA
J. Silver, BSc PhD
P. E. SimpSon, BA, MEd, PhD
D. Slonin, BA, MA, Psy.D.
J. Stewart, BA, MSc, PhD
J. Stewart, BA, BEd, MEd, EdD
J. Sumner
R. Thapa, BEd
S. Thomas, BA, BEd, MEd, PhD
B. Toner, BA, MA, PhD
U. Umangay, BSc, BA, BED, MED, EdD
R. Warner, BA, BEd, MA, EdD
C. D. Webster
R. J. Wilson
C. D. Yawney, BA, MA, PhD

Address:
Department of Adult Education and Counselling Psychology
The Ontario Institute for Studies in Education of the University of Toronto (OISVUT)
Seventh Floor, 252 Bloor Street West
Toronto, Ontario
Canada
M5S 1V6

Fax: (416) 926-4749
Web: www.oise.utoronto.ca/depts/aecdcp/

Application Packages
Initial enquiries and requests for application packages regarding admission to graduate studies in the Adult Education and Counselling Psychology Department 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
Canada
M5S 1V6

Telephone: (416) 923-6641 ext. 2663
or 1-800-785-3345
E-mail: gradstudy@oise.utoronto.ca

Such 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.

General Information
For application information and forms, visit the Registrar's Office Web site:
www.ro.oise.utoronto.ca

For further application information, contact:
Graduate Studies Admissions Unit
Room 4-485

Telephone: 416-923-6641 ext. 2663
or 1-800-785-3345
E-mail: gradstudy@oise.utoronto.ca

Adult Education and Counselling Psychology is the second largest of the five departments within OISE/UT and offers a full range of graduate degrees (M.A., M.Ed., Ph.D., and Ed.D.) in each of two major programs:
1 Adult Education and Community Development
2 Counselling Psychology

Adult Education and Community Development Program
The Adult Education and Community Development program provides a place to study and contribute to theory, practice, and policy concerning formal and informal adult learning in organizations, communities, workplaces, and social movements in local, national, and international contexts. The program situates learning within a broad framework, including the impact of various hierarchies (e.g., social class, gender, race, and ethnicity). Faculty emphasize collaborative, relational, mutual orientations to learning. Perspectives include Aboriginal and indigenous, anti-racist and anti-colonial, arts-informed, environmental/ecological, embodied, feminist, holistic, international comparative/global, labour, political economy, transformative. Knowledge and learning/teaching outside the academy are honoured, and importance is placed on building mutually beneficial connections with diverse individuals, groups, organizations, and communities in Canada and abroad.

Degree of Master of Education
The M.Ed. is a non-thesis degree which can be taken on either a full-time or part-time basis. The program of study normally consists of ten half-courses, 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.

Degree of Master of Arts
The M.A. is a research-based degree program which can be taken on a full-time or part-time basis. Students normally take eight half-courses, at least four of which 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.* During their program, M.A. students are expected to have exposure to both qualitative and quantitative approaches to research. M.A. students complete a thesis which may lay the groundwork for doctoral research.

Degree of Doctor of Education
The Ed.D. program is designed to provide opportunities for more advanced study for those who are already engaged in a career in a related field and who are preparing themselves for further leadership. It is intended to provide the option of a professional doctoral degree culminating in a field-based dissertation. The Ed.D. can be taken on a full-time or part-time basis. In addition to completing a comprehensive requirement and writing a thesis, it is recommended that Ed.D candidates take AEC 3111H Academic and Professional Seminar for Adult Educators. In addition, they are required to take eight half-courses, including a four half-course major in the Adult Education program. A minimum of four half-courses must be at the 3000 level and these should include:

1 AEC 3102H Doctoral Thesis Course in Adult Education;
2 at least one specialized research methods course;
3 a doctoral level Practicum in Adult Education. For students fulfilling this Ed.D. requirement, AEC 3152H Individual Reading and Research in Adult Education: Doctoral Level will be oriented towards a field-based practicum experience, designed by the student in consultation with the supervisor.
Note: Ed.D. students lacking a background in Adult Education in their master's program will be required to take course AEC 1100H Outline of Adult Education as part of their eight-course load, to formally expose them to the history and philosophy of the field of Adult Education.

Degree of Doctor of Philosophy
The Ph.D. 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 educational practice. The Adult Education and Community Development program offers both a full-time and flexible-time Ph.D. Full-time Ph.D. students must complete their degree within six years. They begin as a cohort and are expected to take the required course AEC 3102H Doctoral Thesis Course in Adult Education in the first session of their program. Flexible-time Ph.D. students must complete their degree within eight years. They are encouraged to take AEC 3102H Doctoral Thesis Course in Adult Education in the first session of their program. Otherwise, degree requirements for both programs are the same. There are six half-courses, at least four of which 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 a seventh half-course providing such background. A minimum of four courses must be at the doctoral/3000 level, including course AEC 3102H. Students also normally take the non-credit course AEC 3111H Academic and Professional Seminar for Adult Educators and at least one specialized research methods course. In addition] all students are expected to complete a comprehensive requirement and a thesis.

Faculty
The Adult Education and Community Development program faculty are grouped into four areas of study:
1 Aboriginal/Indigenous Education
2 Workplace Learning and Change
3 Creative Inquiry, Personal and Professional Learning
4 Community, International, and Transformative Learning

Collaborative Programs
Collaborative master's programs are also available through the Adult Education and Community Development program:
1 Addiction Studies
2 Aging and the Life Course
3 Community Development
4 Comparative, International and Development Education
5 Environmental Studies
6 Women's Studies
For details, consult the separate entries in this calendar.

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

AEC 1100H Outline of Adult Education/ D. Schugurensky, S. Mojab, Staff
AEC 1101H Program Planning in Adult Education/B. Burstow, Staff
AEC 1102H Community Development: Innovative Models/J. Quarter
AEC 1103H Introduction to Research Methods in Adult Education/ J. G. Knowles, Staff
AEC 1104H Community Education and Organizing/A. Miles
AEC 1106H Small-Group Experience and Theory/lStaff
AEC 1107H Developing and Leading High Performing Teams: Theory and Practice/M. E. Laiken
AEC 1108H Adult Leaming (Credit/No Credit)/ M. E. Laiken, Staff
AEC 1110H Basic Processes in Facilitating Adult Learning/ D. Schugurensky] Staff
AEC 1113H Gender and Hierarchy at Work/ K. Mirchandani
AEC 1114H Comparative and International Perspectives in Adult Education/ D. Schugurensky, S. Mojab, K. Mundy
AEC 1117H Consulting Skills for Adult Educators/Staff
AEC 1119H Creating a Learning Organization/ N. Jackson, Staff

AEC 1122H Practicum in Adult Education and Community Development (Credit/No Credit)/ K. Mirchandani, M. E. Laiken, J. G. Knowles
AEC 1125H Contemporary Issues in Adult Literacy/N. Jackson
AEC 1130H A Participant-Directed Seminar: Learning in Organizations/ M. Laiken, Staff
AEC 1131H Special Topics in Adult Education (Master's)/Staff
AEC 1135H Practicum in Organization Development (Credit/No Credit)/ M. Laiken, K. Mirchandani, Staff
AEC 1137H Evaluation of Adult Education Programs/Staff
AEC 1141H Organizations and the Adult Educator: Historical and Theoretical Perspectives on Organization Development/ M. Laiken, Staff
AEC 1143H Introduction to Feminist Perspectives on Society and Education/ A. R. Miles, Staff
AEC 1145H Participatory Research in the Community and the Workplace/ R. Ng, Staff
AEC 1146H Women, Globalization, and Citizenship/S. Mojab
AEC 1148H An Introduction to Workplace, Organizational, and Economic Democracy/J. Quarter
AEC 1150H Critical Perspectives on Organizational Theory, Development and Practice/K. Mirchandani
AEC 1152H Individual Reading and Research in Adult Education: Master's Levellstaff
AEC 1156H Power and Difference in the Workplace/S. Mojab
AEC 1160H Introduction to Transformative Learning Studies/E. V. O 'Sullivan
AEC 1165H Poetry, Social Movements, and Adult Learning/Staff
AEC 1170H Practitioners' Experienced Knowledge/A. Cole, J. G. Knowles, Staff
AEC 1171H Treaty Rights and Aboriginal Education: Contemporary Policies and Programs/ E. Antone, Staff

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

AEC 1173H Creativity and Wellness: Learning to Thrive/Staff
AEC 1175H Teacher Learning in School Contexts/A. Cole
AEC 1178H Practitioner/Ecological Identity and Reflexive Inquiry/J. G. Knowles
AEC 1180H Aboriginal World Views: Implications for Education/L.. Fitznor
AEC 1181H Embodied Learning and Qi Gong/ R. Ng, Staff
AEC 1182H Teaching, Learning and Working in Nonprofit and Public Sector Organizations/B. J. Richmond
AEC 3102H+ Doctoral Thesis Course in Adult Education (Credit/No Credit)/ J. Quarter, Staff
AEC 3103H Teaching about Global and Social Issues/E. V. O'Sullivan
AEC 3104H Political Economy of Adult Education in Global Perspectives/S. Mojab, D. Schugurensky, Staff
AEC 3111H Academic and Professional Seminar for Adult Educators/ Staff
AEC 3113H Adult Education and Public Policy/S. Mojab
AEC 3119H Global Perspectives on Feminist Education, Community Development, and Community Transformation/A. R. Miles, Staff
AEC 3126H Transformative Education and the Global Community: Creativity and Social Change/€. V. O 'Sullivan, Staff
AEC 331H Special Topics in Adult Education (Doctoral)/Staff
AEC 332H Special Topics in Women in Development and Community Transformation/Dame N. Barrow (Distinguished Visitor)
AEC 338H Social Theories and Adult EducationlD. Schugurensky, Staff
AEC 3140H Post-Colonial Relations and Transformative Education/R. Ng
AEC 3152H Individual Reading and Research in Adult Education: Doctoral Levellstaff
AEC 3170H Perspectives on Qualitative Research: Part I/A. Cole
AEC 3171H Perspectives on Qualitative Research: Part II/A. Cole
AEC 3172H Renewal in Adult Education/Staff
AEC 3173H Effecting Change: Creating Wellness/Staff

AEC 3176H Sense of Place in Professional and Natural Contexts/J.G. Knowles
AEC 3177H Arts-Informed Perspectives in Educational Research/A. L. Cole and/or J. G. Knowles
AEC 3179H Work, Technology and the Knowledge Economy/ K. Mirchandani
AEC 3180H Global Governance and Educational Change: the Politics of International Cooperation in Education/K. E. Mundy
AEC 3181H Ferminist Standpoints: Critical and Post-Structural Approaches/ A. Miles

Interprograrn Courses
The following courses are accepted for credit in the Adult Education program and will satisfy that program's specialization requirement. For descriptions, see the relevant programs.

AEC 1400H Special Topics in Adult Education and Counselling Psychology/ Staff
AEC 1405H Introduction to Qualitative Research: Part I/B. Burstow, Staff.
AEC 1406H Introduction to Qualitative Research: Part II/B. Burstow, Staff
AEC 1408H Working with Survivors of Trauma/B. Burstow
AEC 3233H Research Seminar in Career Development/M. A. Guttrnan, Staff
SES 1925H Indigenous Knowledge and Decolonization: Pedagogical Implications/G. J. S. Dei
SES 2942H Education and Work/D. W. Livingstone
SES 2970H Countering Myths about Aboriginal Peoples through Multiple Medias/J. Iseke-Barnes
SES 3951H Canadian Political Economy and Education/D. W. Livingstone

Counselling Psychology Program
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 servicers.

The Counselling Psychology program offers three fields of specialization:
1 Counselling Psychology for Psychology Specialists (M.A., Ph.D.)
2 Counselling Psychology for Community Settings (M.Ed., Ed.D.)
3 Guidance and Counselling for Schools (M.Ed.)

Counselling Psychology for Psychology Specialists

Degree of Master of Arts
This M.A. program is designed for applicants interested in working as researchers or practitioners in a variety of psychological and educational settings. The program meets the academic 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 Ph.D. program in Counselling Psychology for Psychology Specialists.

The M.A. in Counselling Psychology for Psychology Specialists consists of eight half-courses, 500 hours of practicum, and a master's thesis. Every program of study includes courses in counselling 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, three half-courses are taken in each of the Fall and Winter Sessions and a maximum of two in the Summer Session. It is expected that all degree requirements will be completed within two years.

Degree of 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.

Progress in the program will be reviewed annually. Normally, eight half-courses will be required. The program of study must be taken on a full-time basis. Please note that the Counselling Program is currently adjusting course requirements to conform to the guidelines and principles for the Canadian and American Psy-

chological Association accreditation of programs in professional psychology.

Practicum and Internship
Students are required to complete a 500-hour practicum in conjunction with the doctoral practicum course AEC 3217Y. In addition, students are required to complete 2,000 hours of internship for course credit. 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 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.

Comprehensive Examination
In addition to normal course requirements, students will be examined systematically in general psychology and in professional psychology. The examination will normally be taken at the end of the second year of full-time study.

Counselling Psychology for Community Settings

Degree of 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).

The M.Ed. in Counselling Psychology for Community and Educational Settings requires ten half-courses plus a comprehensive examination. The six half-courses required in Counselling Psychology include one 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. M.Ed. 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.

Degree of 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.

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. Students are required to take at least eight half-courses, six of which must be in Counselling Psychology. Each student must complete a minimum of one year of full-time, on-campus study and, in addition, serve a period of internship in an appropriate setting.

Practicum and Internship
Students are required to complete a 500-hour practicum in conjunction with the doctoral practicum course AEC 3217Y. In addition, students are required to 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.

Guidance and Counselling for Schools

Degree of 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 M.Ed. program may have their degree credited toward Parts I and II of the Ontario College of Teachers' (OCT) Specialist Certificate in Guidance.

Candidates may pursue the M.Ed. degree on a full-time or part-time basis. The requirements are ten half-courses 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 seven half-courses required in Counselling Psychology, every program of study must include counselling and group theory and a practicum experience.

Courses of Instruction
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/Staff
AEC 1203Y+ Practicum in Counselling/M. A. Guttman, L. Stermac, J. E. Watson, J. Silver, Staff
AEC 1205H Individual Intellectual Assessment/Staff
AEC 1207H Counselling Topics in Sexual Orientation and Gender Identity Diversity/J. R. Gillis
AEC 1208H The Counselling Relationship/ N. Piran
AEC 1212H Psychological Aspects of Counselling and Teaching New Canadians/Staff
AEC 1214H Critical Multicultural Practice: Diversity Issues in Counselling/ R. Moodley
AEC 1219H Ethical Issues in Professional Practice in Psychology/ M. Schneider, Staff
AEC 1228H Individual and Group Psychotherapy: Family and Marital Counselling/Staff
AEC 1229H Individual and Group Psychotherapy for Counselling/Staff
AEC 1243H Seminar in Community Psychology and Community Development/ Staff
AEC 1245H Brief Counselling Strategies/Staff
AEC 1247H Practicum in Adult Counselling (Credit/No Credit)/Staff
AEC 1250H Fundamental Concepts of Psychosynthesis: Part I/Staff
AEC 1252H Individual Reading and Research in Counselling Psychology: Master's Level/Staff
AEC 1253H Feminist Issues in Counselling Psychology and Psychotherapy/ K. Jasper, Staff
AEC 1254H Contemporary Issues in Human Sexuality and Sex Education/ M. Schneider
AEC 1257H Females' Psychological Development/staff
AEC 1261H Group Work in Counselling/Staff
AEC 1262H Educational and Psychological Testing for Counselling/Staff
AEC 1263H Seminar in Research Methods for M.A. Students/Staff
AEC 1266H Career Counselling and Development: Transition from School to Work/C. Chen
AEC 1267Y Advanced Practicum in Counselling / Staff
AEC 1268H Career Counselling and Development: Transitions in Adulthood/ C. Chen
AEC 1269H Use of Guided Imagery in Counselling and Psychotherapy/ N. Josefowitz
AEC 1275H Special Topics in Counselling Psychology (Master's)/Staff
AEC 1278H Cognitive Therapy/N. Josefowitz
AEC 1289H Community Mental Health/ M. Schneider
AEC 3211H Counselling and Researching in Context: Critical Perspectives on Counselling and Health Promotion Research/N. Piran
AEC 3215H Seminar in Counselling Psychology: Part I/J. Watson
AEC 3216H Seminar in Counselling Psychology: Part II/Staff

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

AEC 3217Y+ Practicum in Counselling Psychology/N. Piran
AEC 3218H Research Seminar in Counselling/L. Stermac
AEC 3224H Individual Personality and Cognitive Assessment/J. R. Gillis or Staff
AEC 3225H Assessment and Diagnosis of Personality and Psychopathology/J. R. Gillis or Staff
AEC 3233H Research Seminar in Career Development/M. A. Guttman, Staff
AEC 3234Y Research Seminar in Multicultural Studies/R. Moodley
AEC 3243H Fundamentals of Psychoanalysis: Part I/Staff
AEC 3253H Individual Reading and Research in Counselling Psychology: Doctoral Levellstaff
AEC 3258H Special Topics in Counselling Psychology (Doctoral)/Staff
AEC 3260H Psychopathology and Diagnosis/ L. Stermac
AEC 3266H Seminar: Applications of Psychologicat Analysis and Research Methods/Staff
AEC 3267H Training for Counselling Supervision/J. A. Silver
AEC 3268H Internship/J.A. Silver

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/S. Miezitis
AEC 3173H Effecting Change: Creating Wellness/S. Miezitis
AEC 1400H Special Topics in Adult Education and Counselling Psychology/ Staff
AEC 1405H Introduction to Qualitative Research: Part I/B. Burstow, Staff
AEC 1406H Introduction to Qualitative Research: Part II/B. Burstow, Staff
AEC 1408H Working with Survivors of Trauma/B. Burstow

HDP 1223H Depression in the Schools: Assessment, Prevention, and Intervention/S. Miezitis
HDP 3204H Contemporary History and Systems in Human Development and Applied Psychology/ R. Volpe

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

Aerospace Science and Engineering AER

Graduate Faculty

Full Members

G. M. T. D'Eleuterio, BASC, MASc, PhD
C. J. Damaren, BASc, MASc, PhD
J. D. DeLaurier, BS, MS, PhD
M. R. Emami, BSc, MSc, PhD
J. J. Gottlieb, Bsc, MSc, PhD, FCASI
P. R. Grant, BAS, MASc, PhD
C. P. T. Groth, BASc, MASc, PhD
O. L. Gulder, Bsc, MSc, PhD
A. A. Haasz, BASc, MASc, PhD, FCASI
(Director)
J. S. Hansen, BASc, MASc, PhD
(Associate Director and Graduate Coordinator)
H. H. T. Liu, BEng, MEng, PhD
J. R. R. A. Martins, MEng, Msc, PhD, Canada Research Chair
L. D. Reid, BASc, MASc, PhD, FCASI, J. Armand Bombardier Chair in Aerospace Flight
J. P. Sislian, MSc, CandPhysMathSci, PhD
P. C. Stangeby, BSc, MSc, DipSa, DPhil
R. E. Zee, BASc, MASc, PhD
D. W. Zingg, BASc, MASc, PhD, Senior Canada Research Chair
(Associate Director, Admissions and Ph. D. Issues)

Members Emeriti

J. H. de Leeuw, DipEng, MS, PhD, FRSC, FCASI, FAPS
P. C. Hughes, BASc, MASc, PhD, MBA, FCASI, FCAE
P. A. Sullivan, BEng, MEng, DIC, PhD, FCASI
R. C. Tennyson, BASc, MASc, PhD, FCASI

Associate Members

J. W. Davis, BASc, MASc, PhD
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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.

Graduate programs leading to the M.Eng., M.A.Sc., and Ph.D. degrees are offered. Only the M.Eng. may be taken on a part-time basis. The M.A.Sc. program is research oriented and includes a major thesis, while the M.Eng. program is oriented towards professional engineering practice and consists primarily of course work. Advanced graduate research may be undertaken at the Ph.D. level. The requirement for Ph.D. studies is a research-oriented master's degree; the M.Eng. degree does not include thesis work and is not considered to be appropriate preparation for entry into a Ph.D. program.

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

Areas of Research

1 Aircraft Flight Systems

Aircraft Design: Stability and control of aircraft; aeroelasticity; lighter-than-air technology; remotely piloted vehicles.
Vehicle Simulation: Aircraft, ground vehicle and human-machine systems; aircraft control; system integration; flight test.

2 Aerodynamics, Fluid Dynamics and Propulsion

Gasdynamics: Hypersonics; unsteady and high temperature gasdynamics; explosions; blast wave phenomena; turbulent combustion.
Aerodynamics: Subsonic, transonic, supersonic and unsteady aerodynamics; turbulence; aeroacoustics.
Propulsion: Propellers; ram jets; flapping wings; gas turbines.
Computational Fluid Dynamics: Flow solvers for high Reynolds number turbulent and reactive flows; aerodynamic applications; and aerospace propulsion.

3 Structures and Multidisciplinary Optimization

Composite Materials: Structural optimization; impact analysis and response; failure analysis; failure optimization; material property enhancement; thermoplastics.
Structural Analysis and Testing: Finite elements; structural dynamics; elastic stability of structures; space structures.
Fibre-Optic Smart Structures: Fibre-optic structural sensing for intelligent monitoring and damage assessment systems.
Multidisciplinary Optimization of Aircraft Systems.

4 Space Systems Engineering
Space Vehicles: Dynamics and control of flexible spacecraft; damping; gyroelasticity; system identification.
Microsatellites.
Space Robotics: Dynamics and control of flexible manipulator systems; variable-geometry truss manipulators; intelligent control systems; neural networks; laboratory simulation of robotic systems.

5 Engineering Physics
Fusion Energy: Plasma-surface interactions; advanced materials for fusion reactors; ultra-high vacuum systems; fusion fuels; experimental and computer modelling studies on tokamaks.

Many of these research topics apply directly to major scientific and engineering areas of emphasis within the aeronautical and space industry in Canada.

Degree of Master of Engineering
1 Candidates for the M.Eng. degree program shall hold the degree of Bachelor of Applied Science of this University or an equivalent four-year degree in engineering.
2 Under the guidance of the graduate coordinator or a staff supervisor, a candidate selects a program of study which consists of 12 courses. Individual programs will be arranged to make up for background deficiencies.
3 The program may be pursued on a full-time or part-time basis.

Degree of Master of Applied Science
1 Candidates for the M.A.Sc. degree program are admitted under the SGS general regulations. Qualified graduates in engineering, mathematics, physics, or chemistry are encouraged to apply. Individual programs will be arranged to make up for any background deficiency.
2 A program of study will consist of a minimum of five courses, one of which must be
AER 1800H Research Seminar in Aerospace Science and Engineering, and a thesis based on research or development, selected in consultation with the student's supervisor. All of the required courses must be completed during the first year of the program.
3 Research performance of M.A.Sc. students is assessed by a Research Assessment Committee (RAC), which includes the student's supervisor.
4 It is anticipated that M.A.Sc. students will complete their degree requirements in 18 months.
5 See below for information on the direct transfer option from M.A.Sc. to Ph.D.

Degree of Doctor of Philosophy
1 Candidates for Ph.D. studies must have an M.A.Sc. degree in engineering, mathematics, physics, or chemistry and must have demonstrated ability to perform advanced research. The M.Eng. degree, which consists primarily of course work, is not considered to be appropriate preparation for the Ph.D. program. Applicants with a bachelor's degree who wish to pursue Ph.D. studies at UTIAS will initially be admitted into the M.A.Sc. program and will be considered for direct transfer into the Ph.D. program; see below.
2 Students interested in pursuing a Ph.D. degree, who have achieved excellent performance in an M.A.Sc. program at UTIAS, are encouraged to transfer directly into a Ph.D. program, under the same supervisor, at the end of their first year of M.A.Sc studies. Approval for transfer will be based on the student's research ability, research progress during the first year, and academic standing. In what follows, students transferring from an M.A.Sc. to a Ph.D. program shall be referred to as 'transfer students'.
3 Ph.D. students must be registered continuously for every session, including the summer session, on a full-time basis until all degree requirements have been completed. Ph.D. students starting with an M.A.Sc. degree must spend a minimum of two years on campus. Transfer students must be on campus for a minimum of three years from the date of registration in the M.A.Sc. program.
4 Following acceptance into a Ph.D. program, the candidate shall undertake a program of study under the guidance of a Doctoral Examination Committee (DEC) which includes the candidate's supervisor.
5 A Ph.D. student's study program includes course work and a thesis which must be based on research conducted while registered for the Ph.D. program. Ph.D. students starting with an M.A.Sc. degree require four courses. Transfer students need two courses in addition to the five completed prior to the M.A.Sc. to Ph.D. transfer for a total of seven courses. All courses must be completed during the first two years in the Ph.D. program.
6 It is anticipated that a student with a master's degree in a discipline appropriate to the field of Ph.D. study will complete the Ph.D. 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 M.A.Sc. program. The DEC plays an important role in assisting students to meet this goal. The functions of the DEC are to:

a ascertain the suitability of the student for advanced research,
b assess the thesis topic,
c conduct formal reviews of the student's progress at least once a year (unsatisfactory progress may result in the termination of the student's candidacy), and
d provide first assessment of the completed thesis.
7 Program Milestones:
a The first DEC meeting is held within six months of Ph.D. program start (or date of transfer for transfer students); the aim is to identify the topic and scope of the thesis.
b The second DEC meeting (approximately 1.5 years after Ph.D. start) is the Qualifying Examination, which determines whether the student should continue in the program or whether his or her candidacy should be terminated.
c Subsequent DEC meetings are held at least once a year.
d Upon completion of the thesis, 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.
8 Prior to convocation, Ph.D. candidates must prepare at least one formal manuscript, based on the thesis, for publication in a refereed journal or refereed conference proceeding.

Financial Support

Guaranteed Minimum Financial Support
In accordance with the UTIAS *guaranteed financial support policy,* students with satisfactory academic performance will be guaranteed a minimum level of financial support for the first sixteen months of M.A.Sc. studies and for years one to four in the Ph.D. program. This minimum level of support will include all external scholarships and fellowships exceeding $5,000/year in total, and a portion of income earned from teaching assistantships. The minimum for the current academic year is set at $18,000 for non-visa students and $22,500 for visa students. Students who have major external scholarships (e.g., NSERC, OGS, OGSST, etc.) will receive $7,500/year supplements (effective September, 2005), bringing their total support well above the minimum level. Students are strongly encouraged to apply for external scholarships. All external awards, major or otherwise, must be disclosed to the UTIAS Graduate Office.

Students in years of study not covered by the *guaranteed financial support policy* may receive financial assistance from their supervisors' research grants/contracts.

External Scholarships/Fellowships
Students are requested to apply for all available external scholarships/fellowships for which they are eligible. Such major scholarships include NSERC, *OGS, and OGSST;* NSERC is restricted to Canadian citizens and permanent residents, but the OGS is available to visa students.

The Kenneth M. Molson Fellowship for Studies in Aerospace Engineering at UTIAS
This fellowship was established with a generous donation from the Kenneth M. Molson Foundation and matching funds from the University of Toronto and the Ontario Government. The income from the fund is used to contribute to the financial support of Ph.D. students in years one to four. The selection is in accordance with the University's Policy on Student Awards and the conditions specified by the Ontario Student Opportunity Trust Fund program. Students qualified for this award are required to complete an application on the request of the UTIAS Graduate Office.

Teaching Assistantships
Teaching Assistantships are available to students with appropriate qualifications. Part of the income earned is included in the guaranteed minimum level of support stated above. Students must apply for teaching assistantships during the summer of the academic year commencing in September. Applications are available on the UTIAS Web site.

Courses of Instruction
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/P. R. Grant
AER 1202H Advanced Flight Dynamics/H. T. Liu
AER 1211H Human Control of Flight Systems/ P. R. Grant
AER 1214H Airplane Dynamics (Flight Laboratory)/P R. Grant, J. H. de Leeuw
AER 1215H Aerodynamics and Flight Mechanics of Rotorcraft/L. D. Reid, J. H. de Leeuw
AER 1220H Remotely Piloted Flight Vehicles/ J. D. DeLaurier

Fluid Dynamics and Propulsion
AER 0510H Aerospace Propulsion/J. P. *Sislian*
AER 1301H Kinetic Theory of Gases/C.P.T. *Groth*

AER 1302H Viscous Flows and Boundary Layers/C. Walsh
AER 1304H Fundamentals of Combustion/ O. L. Gulder
AER 1306H Special Topics in Reacting Flows/ O. L. Gulder
AER 1310H Turbulence Modelling/C. P.T. Groth
AER 1311H Unsteady Gasdynamics/J. J. Gottlieb
AER 1312H High Temperature Compressible Flows/J. J. Gottlieb
AER 1314H Dynamics of Dusty Gases (reading course)/ J.J. Gottlieb
AER 1316H Fundamentals of Computational Fluid Dynamics/D. W. Zingg
AER 1318H Topics in Computational Fluid Dynamics/D. W. Zingg
AER 1320H Air-breathing Propulsion/J. P. Sislian

Structures and Multidisciplinary Optimization

AER 0501H Advanced Mechanics of Structures/J. R. Martins
AER 1401H Introduction to Composite Materials/J. S. Hansen
AER 1402H The Finite Element Method and Applications/J. S. Hansen
AER 1411H Theory of Composite Materials/ J. S. Hansen
AER 1415H Optimization Concepts and Applications/J. R. Martins

Space Systems Engineering

AER 0506H Spacecraft Dynamics and Control I/C. J. Damaren
AER 0525H Robotics/M. R. Emani
AER 1503H Spacecraft Dynamics and Control III/C. J. Damaren
AER 1512H Multibody Dynamics/G. M. T. D 'Eleuterio
AER 1515H Intelligent Robotics/M. R. Emami
AER 1520H Microsatellite Design II/R. E. Zee
AER 1521H Microsatellite Design II/R. E. Zee

Engineering Physics

AER 1705H Plasma Physics and Fusion Energy/P. C. Stangeby
AER 1706H Fusion Reactor Systems/J. W. Davis
AER 1716H Fusion Reactor Materials (reading course) /A. A. Haasz
AER 1717H Applied Plasma Physics I (reading course)/P. C. Stangeby
AER 1720H Applied Plasma Physics II (reading course)/P. C. Stangeby
AER 1725H Introduction to Surface Analysis/ J. Kleiman

Research Seminars and Professional Courses

AER 1800H Research Seminar in Aerospace Science and Engineering/Staff (for first-year M.A.Sc. students only)
AER 1810H M.Eng. Project I (for M. Eng. students only)
AER 1811H M.Eng. Project II (for M. Eng. students only)
JDE 1000H Ethics in Research (Students registered in the M.A.Sc. or Ph. D. 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.)

Aging and the Life Course (Collaborative Program)

Address:
Collaborative Program in Aging and the Life Course
Suite 106, 222 College Street
University of Toronto
Toronto, Ontario
Canada
M5T 3J1

Telephone: (416) 978-0377
Fax: (416) 978-4771
Web: www.utoronto.ca/lifecourse/program/

The Collaborative Program prepares students for specialization in the field of aging, an area that includes individual human aging and population aging, with an emphasis on viewing aging issues within the perspective of the life course.

Candidates 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. Students follow a course of study acceptable to both that unit and the Collaborative Program in Aging and the Life Course. Applications will be considered for the following degree programs:

Adult Education and Counselling Psychology	M.A., M.Ed., Ph.D., Ed.D.
Anthropology	M.A., M.Sc., Ph.D.
Dentistry	M.Sc., Ph.D.
Exercise Sciences	M.Sc., Ph.D.
Health Policy, Management and Evaluation	M.H.Sc., M.H.Sc./M.S.W., MSc., Ph.D.
Information Studies	M.I.St., J.D./M.I.St. Ph.D.
Medical Science	M.Sc., Ph.D.
Nursing Science	M.N., M.N./M.B.A., Ph.D.
Pharmaceutical Sciences	M.Sc., Ph.D.
Psychology	M.A., Ph.D.
Public Health Sciences	M.H.Sc., M.Sc., Ph.D.
Rehabilitation Science	MSc., M.Sc.PTlM.Sc., Ph.D.
Social Work	J.D./M.S.W., M.H.Sc./M.S.W., M.S.W., Ph.D.
Sociology	M.A., Ph.D.
Speech-Language Pathology	M.H.Sc., M.Sc., Ph.D.

Application Procedures

Collaborative programs are administered under the auspices of the School of Graduate Studies. Applicants may apply concurrently to their participating graduate unit and to the Collaborative Program in Aging and the Life Course.

1 Applicants must apply to a participating graduate unit and comply with the admission procedures of that unit.

2 Applicants must forward the following to the Program Committee of the Collaborative Program in Aging and 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 attended previously and currently

c a resume or curriculum vitae

d a letter explaining how their program of study and specific research interests relate to aging and the life course studies at the graduate level

e for Ph.D. applicants only: two letters of reference (with specific mention of aging/llife course studies background)

Note: Students may use copies of official documents (a and b above) for their application to the Collaborative Program in Aging and the Life Course. These may be obtained from their home participating graduate unit.

Program Requirements

In addition to meeting the program requirements of their home department, students must complete two courses (one core and one elective) at both the master's and doctoral levels. It is expected that the student's thesis or practicum (whichever is included in their program of study) would be in the area of aging and the life course.

Upon successful completion of the requirements, students receive, in addition to the master's or doctoral degree from the graduate unit, the notation "Completed the Collaborative Program in Aging and the Life Course" on their transcript.

Core Courses

Master's Level

AGE 2000H Social Determinants of Aging and Health

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)

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
CHL 5211H	Demographic Analysis
DEN 1003Y	Preventive Dentistry
EXS 5501H	Physical Activity and Aging
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 6708H	Advanced Data Analysis
SWK 4405H	Social Gerontology and Social Work
SWK 4613H	Social Work Practice with the Aged
SWK 4618H	Special Issues in Gerontological Social Work

Requests to consider other courses to fulfil program requirements may be submitted to the Program Committee.

Ancient and Medieval Philosophy (Collaborative Program)

Program Committee

R. Barney, BA, PhD, Canada Research Chair/Classics (Director)
J. C. Magee, BA, MA, PhD/Medieval Studies
P. King, PhD/Philosophy

E-mail: rachel.barney@utoronto.ca
Web: www.chass.utoronto.ca/~cpamp/

The graduate departments of Philosophy and Classics, and the Centre for Medieval Studies participate in the Collaborative Program in Ancient and Medieval Philosophy. The program operates only at the doctoral level. Candidates 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 program is administered by the Program Committee which is drawn from all three units and is chaired by the Director who is a member of the Committee. The three units contribute courses and provide facilities and supervision of doctoral research.

All candidates must meet the admission criteria of the unit through which they wish to enrol and must fulfil the normal requirements of the Ph.D. in their home unit. Their program of study must also be approved by the Program Committee and must include the following elements:

1 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.

2 Area or major field examinations must contain a paper involving translation from at least one of Greek, Classical or Medieval Latin, or Arabic (as appropriate to the area or field). This examination will be based on a substantial list of texts relevant to the field or area.

3 Candidates for the Ph.D. in Ancient and Medieval Philosophy are required to have a reading knowledge of two modern languages other than English.

4 Each student must take and successfully complete two graduate half-courses, or the equivalent, in some area of philosophy other than the history of philosophy.

In most cases, some of these elements will be fulfilled by program requirements in the doctoral program of the home unit.

Candidates will normally concentrate in either ancient or medieval philosophy, though it is not necessary to indicate such specialization formally. 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.

Ancient Greek and Roman History (Joint Collaborative Program)

Program Committee

C.F. M. Bruun, BA, MA, PhD/University of Toronto
C. I. Rubincam, BA, PhD/University of Toronto
J. C. Edmondson, BA, MA, PhD/York University (Director)
J. C. Trevett, BA, MA, DPhiVYork University

Address:
Joint Collaborative Program in Ancient Greek and Roman History
Department of Classics
97 St. George Street
University of Toronto
Toronto, Ontario
Canada
M5S 2E8

Telephone: (416) 978-5513
Fax: (416) 978-7174
E-mail: grad.classics@utoronto.ca
Web: www.chass.utoronto.ca/classics/

Nature of the Joint Collaborative Program

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, and 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.

Admission

All candidates must meet the admissions criteria of the unit through which they wish to enrol. Interested students register in the Joint Collaborative Program with the approval of the Program Committee upon admission to the Ph.D. program in either unit. A strong background in Ancient History will be expected of all candidates for admission, as will a level of preparation in the ancient languages and languages of research that is appropriate for the institution in which they register.

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.

Program Requirements

All students will take the required seminars CLA 3020H, CLA 3200Y, as well as three graduate half-courses in Greek and Roman History offered by the collaborating units. They will take all other courses to fulfil 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. All students in the Joint Collaborative Program must complete the requirements of the collaborative program in addition to those of their home unit. 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.

Courses of Instruction

CLA 3020H Research Methods in Ancient History (Credit/No Credit)
CLA 3200Y Work in Progress in Ancient History (Credit/No Credit)

Ancient Studies (Collaborative Program)

Program Committee

C. F. Bruun, BA, MA, PhD/Classics

S. Manning, BA, MA, PhD/History of Art

T. P. Harrison, BA, PhD/Near & Middle Eastern Civilizations

R. J. Leprohon, BA, PhD/Near & Middle Eastern Civilizations (Director)

Address:
Collaborative Program in Ancient Studies
c/o Department of Near and Middle Eastern Civilizations
4 Bancroft Avenue
University of Toronto
Toronto, Ontario
Canada
M5S 1C1

Web: www.chass.utoronto.ca/fine_arts/asp/ascp.html

Nature of the Collaborative Program

The graduate departments of Classics, History of Art, and Near and Middle Eastern Civilizations offer a Collaborative Program in Ancient Studies providing a structure in which the expertise of the faculty and the resources of the three departments are pooled. The program is available at the M.A. and Ph.D. levels and provides students with an opportunity to combine the study of material culture with literature or history, to pursue historical and cultural studies linking the Greco-Roman world and the Near and Middle East, or to pursue studies comparing Aegean or Greco-Roman with Near and Middle Eastern art, myth, literature, society, or history. The participating departments contribute courses and provide facilities and supervision for graduate research. Students may also be able to participate in excavations and other types of archaeological research.

Candidates 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 home department). The home department is responsible for each student's funding and general academic standing. Students in the program follow a course of study acceptable to both the home department and to the Ancient Studies Program Committee. Upon successful completion of the requirements, students receive the M.A. or Ph.D. degree in their home department, with the notation "Cornpleted Collaborative Program in Ancient Studies" on their transcripts.

The Collaborative Program is administered by a Program Committee consisting of a Director, the Graduate Coordinators (or their designates) of the participating departments, and one member from each participating department other than that in which the Director holds a primary appointment.

Faculty and Range of Course Offerings

The faculty in the participating departments cover a broad spectrum of Ancient Mediterranean and Mesopotamian culture.

Classics is one of the largest and most diverse departments in North America, offering courses in Greek and Roman history, languages, literature, science, and philosophy. History of Art has two full-time faculty members in the Ancient area, and their expertise includes the art and archaeology of the Mediterranean world from the Bronze Age to the end of the Roman period. The Walter Graham/Homer Thompson Chair in Aegean Prehistory provides distinctive strength in that field. Near and Middle Eastern Civilizations is one of the largest departments of its kind in North America. It offers programs in the languages, literatures, history, and archaeology of ancient Egypt, Syria-Palestine, and Western Asia. Allied departments such as Anthropology and Medieval Studies provide depth, further enhanced by cross-appointed faculty at the Royal Ontario Museum.

For specific courses, see the separate departmental listings.

Admission

Students must satisfy the admission requirements of the department in which they are registered (the home department). See the separate listings for each participating department. The Director of Ancient Studies can provide helpful advice on admissions.

In addition to meeting the admission requirements of their home department, students who wish to be admitted to Ancient Studies must have:

1 a substantial preparation in subject areas covered by at least two of the collaborating departments;

2 an appropriate level of training in at least one ancient language (some areas of doctoral research will require more than one ancient language). Otherwise qualified students whose preparation is insufficient in one or more areas may be advised to enrol in a preliminary year in the M.A. program or as special (non-degree) students.

Admission to the home department is determined by each department; enrolment in the Collaborative Program is determined by the Program Committee, normally at the time of

admission (although later enrolment is also permissible).

Program Requirements

The aim of each department's Ph.D. program in Ancient Studies is to prepare students for a career in university-level teaching and research, combining expertise in one or more ancient languages and cultures. Students may enter the Ph.D. program directly from a strong B.A. Those entering with an M.A. in an appropriate field may begin the Ph.D. with advanced standing.

The aim of each department's M.A. program in Ancient Studies is to prepare students for its interdisciplinary doctoral program in the field.

Master of Arts

Ancient Studies students in all departments must fulfil the program requirements of the home department and pursue a program of study approved by the Collaborative Program Committee. In addition to, or in conjunction with, the fulfilment of the requirements of the home department, as specified by the home department, students must:

1 successfully take at least one half-course equivalent of study in the subject area of another participating department;

2 demonstrate competence in at least one ancient language relevant to the student's research, as approved by the Collaborative Program Director, by passing a sight translation examination with a grade of B- or better.

Doctor of Philosophy

Ancient Studies students in all departments must fulfil the Ph.D. requirements of their home departments and pursue a program of study approved by the Collaborative Program Director. In conjunction with, or in addition to, the requirements specified by the home department, students enrolled in the Ancient Studies Program are required to take two full-course equivalents and one or more exams: an examination in the minor field in the subject matter of another collaborating department, and an examination in an ancient language. Accordingly, Ancient Studies students will:

1 by the end of the first year of Ph.D. registration, fulfil all the requirements for the M.A. (above). Students with an M.A. in Ancient Studies will have done so already.

2 by the end of the first year of Ph.D. registration, demonstrate competence in at least one ancient language relevant to the student's research, as approved by the Program Director, by passing a sight translation examination with a grade of B+ or better.

3 complete all required course work before the major field/comprehensive examinations are attempted. A total of four half-course equivalents must be taken in the subject area of another participating department (this includes courses taken during the M.A.). This may require courses beyond the number prescribed by the home department.

4 demonstrate reading knowledge of two modern languages of research (other than English and normally including German) before the major field/comprehensive examinations are attempted.

5 complete a major field/comprehensive exam, according to the requirements of the home department and normally within the subject area of the home department, and also a minor field within the subject area of another participating department. The major field/comprehensive exam and the minor field are tested by special examination. The major field/comprehensive exam provides context for the candidate's dissertation topic. The minor field is designed to develop the student's competence in a second discipline.

6 complete a dissertation by the end of the fifth year.

Ph.D. candidates whose major field involves the study of material culture will normally be required to spend three months undertaking approved research outside North America.

Anthropology ANT

Graduate Faculty

Full Members

G. A. Alderson-Smith, MA, PhD
E. B. Banning, BA, MA, PhD
D. R. Begun, MA, PhD
J. P. Boddy, BA, MA, PhD, FRSC
M. Chazan, BA, MA, PhD
G. G. Coupland, BA, MA, PhD
G. Crawford, BSc, MA, PhD
H. Cunningham, BA, MA, PhD
M. Danesi, BA, MA, PhD, FRSC
N. Z. Davis, BA, MA, PhD, FAmAcAs, CFBrAc
G. Dei, BA, MA, PhD
T. M. Friesen, BA, MA, PhD
G. S. Gillison, BA, PhD
P. Goldberg, B.A., M.S., Ph.D.
R. S. Hagey, BScN, MA, PhD
M. S. Heller, BA, MA, PhD
I. Kalmar, BA, MA, PhD
M. J. Lambek, BA, MA, PhD, FRSC
M. A. Latta, BA, MA, PhD
R. B. Lee, BA, MA, PhD, FRSC, University Professor
M. D. Levin, BA, MA, PhD
T. Li, BA, PhD , Canada Research Chair
H. V. Luong, BA, MA, PhD
(Chair)
B. S. McElhinny, BA, MA, PhD
(Coordinator of Graduate Studies)
E. Molto BA, PhD
C. E. Orser, Jr, B.S., M.A., Ph.D
S. Pfeiffer, BA, MA, PhD
L. A. Sawchuk, BA, MA, PhD
D. W. Sellen, BA, MA, PhD, Canada Research Chair
J. Sidnell, BA,MA,PhD
K. Sieciechowicz, BA, MA, PhD
B. A. Sigmon, BA, MS, PhD
D. Smith, PhD
D. H. Turner, BA, MA, PhD
K. Young, BSc.MD,MSc, PhD, FRCPC, LMCC
E. Zubrow, B.A., M.A.

Members Emeriti

F. D. Burton, BSc, MA, PhD
W. P. Carstens, BA, PhD
J. J. Chew, MA, PhD
R. B. Drewitt, PhD
M. R. Kleindienst, BA, MA, PhD
J. D. Mavalwala, B.s., M.S. Ph.D.
J. T. Mayhall, BA, MA, DDS, PhD
S. Nagata, MA, PhD
S. B. Philpott, BA, MA, PhD
A. K. Ray, BSc, MSc, PhD
W. J. Samarin, BA, PhD
R. w. Shirley, BA, MA, PhD
R. M. Vanderburgh

Associate Members

S. Bamford, BA, MA, PhD
J. D. Barker, BA, MA, PhD
T. M. Kaiser, B.A., M.A., Ph.D.
M. Lehman, BA, MA, PhD
H. Miller, BA,MSc,MA,Phd
E. Pam, BA,MSc,PhD
V. N. Quayson, BA, PhD
H. E. Rogers, BA, MA, PhD
T. Rogers, BA,MPA,PhD
M. Roksandic, BA, PhD
T. Sanders, BA,MA,MSc,PhD
M. A. Schillaci, BA,MA, PHD
J. S. Song, B.A., PH.D.
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The Department of Anthropology offers research training and courses of instruction in the fields of archaeology, linguistic anthropology, medical anthropology, physical anthropology, and social-cultural anthropology.

Admission Requirements

Applicants are admitted to the M.A., M.Sc., and Ph.D. programs under the general regulations of the School of Graduate Studies.

All applicants to the M.A. and M.Sc. programs are required to have at least a B+ average, or equivalent, before being considered by the Departmental Admissions Committee.

Admission to the Ph.D. program is offered only to excellent students who, by the time of enrolment, have completed an M.A. degree in anthropology (or a cognate subject) or have earned the equivalent of a four-year B.A. with a concentration in anthropology. Applicants from both levels 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 M.A. or M.Sc. However, students with exceptionally strong undergraduate backgrounds (i.e., with a cumulative GPA of 3.85 or

above) are invited to apply for direct entry to the Ph.D. program by indicating this preference on their application form. Applicants are encouraged to identify departmental members with whom they want to conduct Ph.D. research. The Department regrets that it cannot admit students to the Ph.D. program, regardless of their qualifications, unless a supervisor is available.

Applicants for M.A., M.Sc., and Ph.D. programs must also satisfy the Department that they have the appropriate background to enter a particular program of graduate study. In addition to two letters of reference, a brief statement of interest (not exceeding 1,000 words) is required for the admissions application.

Program Requirements

Degree of Master of Arts and Master of Science

The Department offers a Master of Arts degree program in the five sub-fields of Anthropology and a Master of Science degree program, normally in archaeology, medical anthropology, and physical anthropology.

Degree of Master of Arts

1 The M.A. program normally extends over a 12-month period lasting from September to September, formal instruction being offered from September to April.
2 The M.A. program may also be taken on a part-time basis.
3 Candidates are required to complete the equivalent of four full courses which must include ANT 1001H, ANT 1002H, and ANT 2000Y.

Degree of Master of Science

1 The M.Sc. program is a two-year program that is normally completed by the summer of the second year.
2 The M.Sc. program may also be taken on a part-time basis.
3 Candidates are required to complete the equivalent of five full courses which must include ANT 1001H, ANT 1002H, and ANT 2500Y. Of the other three full courses, 1.5 courses will normally be science courses in archaeology, medical anthropology, ,physical anthropology, or related disciplines depending on the student's program.

Degree of Doctor of Philosophy

The Ph.D. 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. At the beginning of the year, each student will submit, with the SGS Enrolment Form, a Program Statement describing his or her plan to meet program requirements. Each student will normally be involved in fieldwork, in the broad meaning of the term, and in theoretical analysis.

Direct Entry Students

Candidates who enter the Ph.D. program from a B.A. or B.Sc. degree program should plan to complete their work within six to seven years. They will take a minimum of 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. Students will need to attain an annual average of at least A- to continue in the Ph.D. program in good standing. Those entering the Ph.D. program from a B.A. or B.Sc. are expected to have written and defended their research proposals by the end of the second session of their third year.

Entry with a Master's Degree

Candidates who enter the Ph.D. program from a M.A. or M.Sc. degree program should plan to complete their work within five or six years. They will take a minimum of three full courses. Candidates entering from a master's degree program will need to attain at least an A- average in their course work to continue in the Ph.D. program in good standing; they are expected to have written and defended their research proposals by the end of the second session of their second year.

All Ph.D. Students

Before proceeding to full-time research, candidates must complete these program requirements:
1 be resident on campus for one year.
2 complete course work requirements, including ANT 1004H and at least one graduate half-course in anthropological theory relevant to their field of study.
3 gain experience in research methods and design. This requirement can be filled by completing course work in methodology or, with the department's assent, undertaking faculty-supervised fieldwork or laboratory research.
4 present and defend a thesis proposal.
5 demonstrate a reading knowledge of a language other than English and additional languages (or appropriate linguistic preparation) for special field situations.

Collaborative Programs

The Department of Anthropology participates in the following collaborative programs:

1 Addiction Studies
2 Aging and the Life Course
3 Asia-Pacific Studies
4 Environmental Studies
5 Ethnic and Pluralism Studies
6 International Relations
7 Jewish Studies
8 Semiotics
9 South Asian Studies
10 Women's Studies

For details on these programs, see separate entries in this calendar.

Courses of Instruction

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
ANT 1001H Social Theory and Method in Anthropology
ANT 1002H Evolutionary and Ecological Theory and Method in Anthropology
ANT 1004H Career Development in Anthropology
ANT 1096H Quantitative Methods I/Staff
ANT 1099H Quantitative Methods II/Staff
ANT 1155H,Y+ Research (or reading seminar)/ Staff
ANT 1156H,Y+ Research (or reading seminar)/ Staff
ANT 1157H,Y+ Research (or reading seminar)/ Staff
ANT 1158H,Y+ Research (or reading seminar)/ Staff
ANT 2000Y° M.A. Research Paper
ANT 2500Y° M.Sc. Research Paper
JAC 1001H Media, Mind, and Society/Staff
JTH 3000H Coordinating Seminar in Ethnic and Pluralism Studies (for students in the Ethnic and Pluralism Studies Collaborative Program)

° 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.

Archaeology

JPA 1040Y Advanced Physics and Archaeology/E. B. Banning, R. M. Farquhar
ANT 4020H,Y Archaeology Theory and Technique/Staff
ANT 4022H,Y Culture Resource Management/ M. A. Latta
ANT 4025H Archaeology of Eastern North America/Staff
ANT 4026H Arctic Archaeology/T. M. Friesen
ANT 4027H,Y Archaeology of Western North America/Staff
ANT 402811 Archaeology of the Northeast/ Staff
ANT 4029H Lithic Technology/M. Chazan
ANT 4035H Far Eastern Culture History/G. W. Crawford
ANT 4036H Archaeobotany/G. W. Crawford
ANT 4037H,Y+ Faunal Archaeo-Osteology/ T. M. Friesen
ANT 4038H Archaeology of Urban Development/staff
ANT 4039H Origin and Nature of Food Producing Societies/D. G. Smith
ANT 4040H Archaeology of Hunter-Gatherers/ T. M. Friesen
ANT 4041H Landscape Archaeology/E. B. Banning
ANT 4050H Zooarchaeology/T. M. Friesen
ANT 4060H Specific Problems: Old World/ Staff
ANT 4061H Ecological Perspectives in Archaeology/Staff
ANT 4065H Specific Problems: New World/ G. G. Coupland
ANT 4066H Household Archaeology/G. G. Coupland
ANT 4067H Historical, Industrial, and Ethnohistoric Archaeology: the Science of Documented Societies/M. Latta
ANT 4068H Archaeology of Technology/ H. M.-L. Miller

Linguistic Anthropology

JAL 1145H Introduction to Field Methods/ Staff
JAL 1155H Language and Gender/ B. McElhinny
JAL 1170H Language Typology/Staff
JAL 1171Y Dialectology/J. Chambers
ANT 5142Y Language in Anthropological Thought/Staff
ANT 5143Y Areal Studies in Linguistic Anthropology: Africa, East Asia, North America, Ocean/Staff

ANT 5144H Language and Social Action/ B. McElhinny, J. Sidnell
ANT 5145H Classic Texts in Cultural Studies/ M. Danesi
ANT 5146H Colonial and Postcolonial Discourses//. Kalmar
ANT 5162Y Ethnography of Communication/ Staff
ANT 5167H Language, Ideology, and Political Economy/H. V. Luong
JSA 5147H Language, Nationalism and Post-Nationalism/M. Heller

Medical Anthropology

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

Physical Anthropology

ANT 3004H Advanced Topics in Primatology/ Staff
ANT 3005H Advanced Topics in Paleoanthropology/D. R. Begun
ANT 3010H Human Osteology: Theory and Practice/S. Pfeiffer
ANT 3011H Advanced Topics in Human Biology and Genetics/Staff
ANT 3020H Method and Theory in Paleoanthropology/D. Begun
ANT 3021H Development of Thought in Biological Anthropology/B. Sigmon
ANT 3031H,Y Advanced Research Seminar I/ Staff
ANT 3032H,Y Advanced Research Seminar II/ Staff
ANT 3033H,Y Advanced Research Seminar III/ Staff
ANT 3034H,Y+ Advanced Research Seminar IV/Staff
ANT 3040H Hunter-Gatherers in Evolutionary Perspective/S. Pfeiffer
ANT 3041H Evolutionary Perspectives on Growth and Development/ M. Schillaci
ANT 3042H Advanced Topics in Primate Ecology/S. Lehman
ANT 3430Y Paleoanthropology Fieldwork/ D. Begun
ANT 3439H Advanced Seminar in Forensic Anthropology/Staff
ANT 3440H Molecular Anthropology: Theory and Practice/E. Parra

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

Social and Cultural

ANT 6001H Development of Anthropological Thought I/Staff
ANT 6002H Development of Anthropological Thought II/Staff
ANT 6003H Critical Issues in Ethnography I/ Staff
ANT 6004H Critical Issues in Ethnography II/ Staff
ANT 6010H Conceptualizing Environments/ K. Sieciechowicz
ANT 6020H Global Culture and Constructions of the Local/G. A. Smith
ANT 6021H Intellectuals and Politics 1903-2003/G. Smith
ANT 6022H Symbolic Anthropology: Structuralism, Hermeneutics, and Poststructuralism/J. Barker
ANT 6023H Governmentality, Development and the Improvement of the World/T. Li
ANT 6024H Contemporary Trends in Anthropological Theory/J. Barker, H. V. Luong
ANT 6025H Anthropology and Epistemology/ T. Sanders
ANT 6031H,Y Advanced Research Seminar I/ Staff
ANT 6032H,Y Advanced Research Seminar II/ Staff
ANT 6033H,Y Advanced Research Seminar III/ Staff
ANT 6034H,Y Advanced Research Seminar IV/ Staff
ANT 6035H,Y Advanced Research Seminar V/ Staff
ANT 6036H,Y Advanced Research Seminar VI/ Staff
ANT 6037H,Y Advanced Research Seminar VII/ Staff
ANT 6038H,Y+ Advanced Research Seminar VIII/Staff
ANT 6040H Approaches to Fieldwork I/Staff
ANT 6041H Approaches to Fieldwork II/Staff
ANT 6050H Reading Course in Specific Area and Theory I/Staff
ANT 6051H Reading Course in Specific Area and Theory II/Staff
ANT 6052Y Reading Course in Specific Area and Theory III/Staff
ANT 6054H Reconfiguring Kinship (Studies): Conceiving Relatedness in the Twenty-first Century/S. Bamford
EAS 1603H Anthropology of South Korea/ J. Song
JAR 6053H Aboriginal Religion in Comparative Experience/D. H. Turner
JAR 6054H The Anthropology of Religious Experience/D. H. Turner

Architecture, Landscape, and Design

Graduate Faculty

Full Members

G. P. Baird, B.Arch, AM (Hon), OAA, FRAIC (Dean)
L. Richards, BArch, MArch
R. El-Khoury, BFA, BArch, MScAS, MArch, PhD

Members Emeriti

A. Eardley, AADip(Hons), MA
D. H. Lee, BArch, MSc, MBA
P. Sandori, DiplngArch
J. A. Stinson, DipArch(Hons), MA
B. L. van Ginkel, BArch, MCP

Associate Members

P. Belanger, BLA, MLA
A. Blackwell, BES, BArch, MUD
D. Bowick, BEng
D. Carter, MA, MArch
R. Comay, BA, MA, PhD
J. W. Danahy, BLA, CUrbDes, MScUrb&DesPl
J. Dougan, BSc, MSc
I. Elias, BLA, BA, OCAD
E. H. Fife, BLA, MLA
S. T. Fong, BArch, MArch
R. Glover, BArch, MBA
M. Hess, BA,MUP,PhD
A. Jones, BArch, MA
T. Kesik, BASc, MASc, PhD, PEng
R. A. Levit, BA, MArch
D. J. Lieberman, BFA (Cal Arts), AA Dipl (London)
A. T. Liu, BA, MArch
M. L. Lobsinger, B.A., B.E.S., B.Arch., M.Des, PhD. (Coordinator of Graduate Studies)
M. Meredith, BArch, MArch
P. Mezei, BES, B.Arch
D. Nash
J. P. O'keefe, BASc, MSc
D. Oleson, BArch
A. Payne, BA, MA, PhD
P. Petricone, BArch, MArch
S. Powadiuk, BA(Hons), BFA
J. A. Roche, BFA, MLA
S. Ruptash, BArch
B. W. Sampson, BArch
P. Scrivano, D.Arch., PhD
B. Shim, BES, BArch
J. Shnier, BES, BArch
M. W. Sterling, BES, BArch
K. Sugden, Bsc, BES, BArch
F. Urban, BA, MA, BFA, PGS
T. Van Elslander, BA, BArch, MArch
C. Waldheim, BDes (Hons.), M.Arch
B. Webster-Tweel, BA, B.Environrnental Design, M.Arch
S. R. Williamson, BSc. (Arch.), MArch
R. M. Wright, BScRec, MLA

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The Faculty of Architecture, Landscape, and Design offers three graduate programs leading to the degrees of Master of Architecture, Master of Landscape Architecture, and Master of Urban Design.

Degree of Master of Architecture

The Master of Architecture (M.Arch.) 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 change. The greater Toronto region is used as an urban laboratory for the development of new knowledge and forms of practice.

Admission Requirements

The M.Arch. is a 3.5-year program intended for individuals with a 4-year bachelor's degree (B.A., B.Sc., B.A.Sc.) demonstrating a final year grade point average of at least mid-B, and showing leadership potential in the field. The following courses are required for admission: secondary calculus, secondary physics, and university architectural history (half-credit). Preparation in the visual arts, such as drawing, sculpture, graphics, photography, film, or new media, as well as computing and advanced writing skills is recommended. 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.

Program Requirements

Students study full-time, taking all required courses in each given session. Students must take a total of 17.5 full-course equivalents (FCE): 15.0 are in core courses and 2.5 are in electives. Within the elective requirements, 1.0 FCE must be in the History and Theory stream. 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. The M.Arch. program is normally expected to be completed in 7 sessions (3.5 years); however, it should be noted that the time limit to complete the degree requirements is 6 years. The defense of the thesis (ARC 4018Y) will take place early in January following the final session of course work. The Faculty of Architecture, Landscape, and Design will submit degree recommendations to SGS before the end of January.

There is no language requirement for this program 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.

Courses of Instruction

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

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

Professional Practice

ARC 3051H Professional Practice 1
ARC 4052H Professional Practice 2

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
ARC 2032H Architecture after 1945

ARC 2034H Architectural Heritage Conservation
ARC 2039H Architecture Theory
ARC 3031H Analysis of Architectural Form
ARC 3032H Mies van der Rohe
ARC 3033H Selected Topics in Architectural History and Theory
ARC 3034H Selected Architects
ARC 3035H Selected Topics in Urban Design
ARC 3036H Current Art in Its Urban Context
ARC 3038H Global Architecture: History and Theory
ARC 3039H Independent Study and Research in Architecture

Technics and Planning
ARC 3041H Selected Topics in Architecture, Technology, Ecology
ARC 3042H Sustainable Architecture

Professional Practice
ARC 4053H Topics in Professional Practice

Degree of Master of Landscape Architecture
The Master of Landscape Architecture (M.L.A.) 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.

Admission Requirements
The M.L.A. is a three-year professional program for individuals who have completed any four-year bachelor's degree (B.A., B.Sc., B.A.Sc., B.E.S., B.F.A., B.Com.) with a minimum average of B, and have demonstrated leadership potential in the field. Preference is given to individuals who have completed a balanced undergraduate education that includes study in the arts, sciences, and humanities. The following specific courses at the undergraduate level are highly recommended: 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 is recommended.

Program Requirements
Students study full-time, taking all required courses in each given session. Students must take a total of 15.5 full-course equivalents (FCE): 13.5 are in core courses and 2.0 are in electives. Within the elective requirements, 1.0 FCE must be in courses offered by the Faculty. The remaining 1.0 FCE will be taken in other academic divisions of the University. 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. The M.L.A. program is completed in 3 years; however, it should be noted that the time limit to complete the degree requirements is 6 years.

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.

Courses of Instruction

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

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

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

Degree of Master of Urban Design

The Master of Urban Design (M.U.D.) program prepares architects and landscape architects for design-based research and professional practice at the urban and regional scales.

The M.U.D. 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.

Admission Requirements

The M.U.D. is a two-year, post-professional program open to applicants with a professional degree in architecture (B.Arch. or M.Arch.) or landscape architecture (B.L.A., M.L.A.). Individuals with a degree in urban planning (M.C.P., M.U.P., or M.Sc.PI.) may be considered for admission if their studies included a design specialization or if they have professional design experience. All candidates must submit a portfolio of design work for review. Candidates 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.

Program Requirements

Students study full-time, taking all required courses in each given session. Students must take a total of 10.0 full-course equivalents (FCE): 5.0 FCE are in core courses including option studios, 2.0 are in thesis, and 3.0 are in electives. Two of the elective courses are to be selected from offerings in the History, Theory, and Criticism category. 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. The M.U.D. program is normally expected to be completed in 2 years; however, it should be noted that the time limit to complete the degree requirements is 5 years.

Courses of Instruction

Core Courses

Design

URD 1011Y Urban Design Studio
URD 1012Y Urban Design Studio Options
URD 2012Y Independent Studio in Urban Design
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

URD 1032H Urban Design in the History of the Post-Industrial World
URD 1033H Urban Design Culture and Media
URD 1034H Toronto - Urban Design and Urban Form
URD 1035H Selected Topics in Urban Design
URD 1036H Case Studies in Urban Design
PLA 1650H Urban Design: History, Theory, Criticism

Other

URD 1022H Topics in Computer-Aided Urban Design
URD 1041H Urban Infrastructure in Developing Countries
URD 1042H Urban Design and Environmental Systems
URD 1043H Independent Study in Urban Design

Knowledge Media Design (Collaborative Program)

Students with strong interests and skills in the emerging cross-disciplinary field of knowledge media design may apply to the Collaborative Program in Knowledge Media Design (KMD). As part of the Knowledge Media Institute (KMDI), the program provides a specialization for graduate students from a variety of academic backgrounds. Students must complete KMD 1001H, KMD 1002H, and two half-courses selected from a list of electives; at least one of these half-courses must be from the KMD 2001-2004 series.

For more information, contact kmdixollab@utoronto.ca or visit www.kmdi.utoronto.ca.

Asia-Pacific Studies (Collaborative Program)

Program Committee

H. V. Luong, BA, MA, PhD/Anthropology (Director)
A. Schmid, BA, MA, PhD/East Asian Studies
L. Brandt, BS, MS, PhD/Econornics
V. W. Maclaren, BA, MRP, MSc, PhD, MCIP/ Geography
N. T. Tran, BA, MA, PhD/History
J. E. Oxley/Managernent
J. Wong, BA, MA, PhD/Political Science
I. Peng, BA, BSW, MA, PhD/Sociology

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Nature of the Collaborative Program

Graduate units in Anthropology, East Asian Studies, Economics, Geography, History, Management, Political Science, and Sociology 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 in the collaborative master's degree program are political economy, modern and contemporary social history, international relations, gender, political and social change, economic development, and cultural studies. The collaborative master's degree program in Asia-Pacific Studies contributes to the development of an integrated and interdisciplinary research community in Asia-Pacific Studies at the University of Toronto.

Applicants to the collaborative master's degree program in Asia-Pacific Studies 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.

Application Procedures

Candidates 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 forward to the Director of the collaborative master's degree program the following:

- a copy of the School of Graduate Studies Application Form or, for M.B.A. applicants, the Rotman School of Management Application Form submitted to a participating home graduate unit,
- official undergraduate and graduate transcripts from all institutions attended previously and currently,
- at least two letters of reference with specific mention of Asia-Pacific Studies background or Asia-Pacific experiences
- a statement of purpose
- a curriculum vitae

Admission Requirements

To be considered for admission to the collaborative master's degree program in Asia-Pacific Studies, applicants should have taken the equivalent of four full-year courses with substantial Asia coverage by the time of application, or should have had substantial working or living experience in East or Southeast Asia.

Program Requirements

1 ASI 1000Y
2 A full-course equivalent that may be
a a master's thesis,
b a major research paper in one of the full-year courses related to Asia-Pacific, or
c a thesis-equivalent research paper in an independent research half-course. This option must be combined with an additional half-course on Asia-Pacific listed on the Web site (www.utoronto.ca/asiapacific-ma).
3 Normally the completion of a 300-level (third-year) undergraduate course in Chinese, Japanese, or Korean with a minimum grade of B+ (or equivalent); or of a 200-level (second-year) undergraduate course in another language of East or Southeast Asia with a minimum grade of B+ (or equivalent). For a student

without any background in Chinese, Japanese, or Korean, this requirement can normally be met by two year-long courses and a summer language course, or two summer courses and one year-long course. For a student choosing to specialize in other parts of East Asia or Southeast Asia, the language requirement can normally be met by two summer courses, or one summer course and a year-long course. For students in special cases (interest in environmental studies, international management, and possibly others), the language requirement may be reduced, subject to the joint approval of the Program Director in Asia-Pacific Studies and the graduate coordinator in the home department. The language requirement can be fulfilled either before entering the program or during a student's enrolment in the program.

Courses of Instruction

ASI 1000Y Issues in Asia-Pacific Studies

Please consult the Asia-Pacific Studies Web site for courses offered by participating graduate units.

Astronomy and Astrophysics AST

Graduate Faculty

Full Members

R. G. Abraham, BSc, DPhil, Steacie Fellow
P. Artymowicz, MSc, PhD
C. T. Bolton, BS, MS, PhD
J. R. Bond, BSc, MS, PhD, FRS, FRSC, Fellow CIAR, Fellow APS, University Professor
R. G. Carlberg, BSc, MS, PhD, Fellow CIAR
W. H. Clarke, BA, MA, PhD (Acting Chair)
C. M. Clement, BSc MA, PhD
C. C. Dyer, MSc, PhD
R. Jayawardhana, BSc PhD
L. Kofman, MSc, PhD, Fellow CIAR
J. B. Lester, BA, MS, PhD
P. G. Martin, BSc, MSc, PhD
C. D. Matzner, AB, MA, PhD, Canada Research Chair
S. W. Mochnacki, BSc MSc, PhD
N. W. Murray, BS, PhD, Canada Research Chair
C. B. Netterfield, BSc, PhD, Fellow CIAR
U.-L. Pen, BSc MSC, PhD
J. R. Percy, BSc MA, PhD
S. M. Rucinski, BSc, PhD
G. Srinivasan, BSc MSc, PhD
A. C. Thompson, BS, PhD
M. H. van Kerkwijk, MA, PhD
Y. W. WU, PhD
H. K. C. Yee, BASc, PhD, Canada Research Chair (Associate Chair, Graduate)

Members Emeriti

M. J. Clement, BSc MSc, PhD
J. D. Fernie, BSc MSc, PhD, FRSC
R. F. Garrison, BA, PhD
E. R. Seaquist, BASc, MA, PhD

Associate Members

J. J. Dubinski, BSc MSc, PhD

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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 work and consult with leading theorists who are appointed to or are visiting CITA. In total, there are approximately 100 faculty, post-doctoral fellows, graduate students, and staff in the Department of Astronomy and Astrophysics and in CITA. Students also benefit from direct interactions with the broad range of external speakers invited to the weekly Department and CITA seminar programs and colloquia.

The David Dunlap Observatory (DDO) houses a 1.88-m telescope, the largest in Canada, which is equipped with efficient CCD spectroscopic instruments. DDO also provides shops for electronic and mechanical work. Faculty and students enjoy access to the Magellan 6.5-m telescopes and 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. Applicants from Canadian institutions have preferred access. An endowment fund supports student travel for observations and conferences.

Additional research facilities of the Department include the largest astronomy and astrophysics library in Canada and abundant computing power provided by departmental computers. With CITA, there is a high-performance parallel-computing centre for theoretical astrophysics. Major software packages from NASA, the National Radio Astronomy Observatory, the National Optical Astronomy Observatory, and elsewhere are maintained on the departmental computers.

The Department offers Master of Science and Doctor of Philosophy degree programs, outlined below, and cooperates with CITA and the Department of Physics to offer a Collaborative Master of Science program in Astrophysics.

Admission Requirements

1 Candidates are accepted under the general regulations of the School of Graduate Studies. Applicants who were educated outside Canada should pay particular attention to the English language competency requirements.

2 Because many universities do not offer extensive undergraduate training in astronomy and astrophysics, preparation in physics and mathematics is an acceptable background for candidates.

3 Candidates are strongly advised to take the verbal, quantitative, and advanced physics tests of the Graduate Record Examination administered by the Educational Testing Service, Princeton.

Degree of Doctor of Philosophy

Program Requirements

1 It is intended that the degree program be completed in five years (15 sessions). Candidates are normally expected to be on campus full time for the duration of their program.

2 Candidates are immediately engaged in original research through two required research courses, AST 1501Y and AST 1500Y, with different supervisors. An oral exam by committee is held for each.

Schedule: AST 1501Y is normally completed during the fall/winter of the first year, and AST 1500Y is completed in the following summer.

3 The core of the program is 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.

As a first step, a candidate is required to prepare a written Ph.D. thesis proposal (possibly, but not necessarily, on a theme emerging from one of the first two research courses) and defend it in an oral examination conducted by a panel of faculty members.

The intention of this "qualifying examination" is to assess the candidate's ability and readiness to carry forward and successfully complete independent Ph.D.-level research. This assessment is based on the candidate's graduate record to date, including graduate lecture courses and research performed, together with the presentation and defence of the proposed Ph.D. thesis.

Schedule: The qualifying examination is taken after four and within five sessions of beginning the program. Candidates register each year, beginning in the second year, in the research course AST 400*Y (in sequence of the last digit: 2, 3, etc.).

4 Candidates follow an approved program of study including:

a the research courses AST 1500Y, AST 1501Y, and AST 400*Y (in sequence of the last digit: 2, 3, etc.) and

b a minimum of four half-courses, at least two of which are from among the AST Elective or Specialized Courses, subject to the approval of the instructor, the candidate's Ph.D. program committee, and the Department.

More courses may be taken for credit or audited as appropriate.

Schedule: The required half-courses are normally taken on average one per session in the fall and winter sessions during the first two years of the program.

Degree of Master of Science

Program Requirements

1 Candidates are immediately engaged in original research through two required research courses, AST 1501Y and AST 1500Y.

Schedule: AST 1501Y is normally completed during the fall/winter of the first year, and AST 1500Y is completed in the following summer.

2 Candidates follow an approved program of study including:

a the research courses AST 1500Y, AST 1501Y, and

b a minimum of four half-courses, at least two of which are from among the AST Elective or Specialized Courses, subject to the approval of the instructor, the candidate's M.Sc. program committee, and the Department.

More courses may be taken for credit or audited as appropriate.

Collaborative Program in Astrophysics

The Departments of Astronomy and Astrophysics, Physics, and CITA cooperate to offer a Master of Science program in astrophysics. For details, consult the Astrophysics (Collaborative Program) entry in this calendar.

Courses of Instruction

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
AST 3020H Advanced Topics in Interstellar Matter and Star Formation I
AST 3021H Advanced Topics in Interstellar Matter and Star Formation II
AST 3030H Advanced Topics in Extragalactic Astronomy and Cosmology I
AST 3031H Advanced Topics in Extragalactic Astronomy and Cosmology II
AST 3050H Theoretical Cosmology
AST 3100H Lecture Series in Specialized Topics (mini courses)

Supplementary Research for Ph. D. Students

AST 3500H Non-Thesis Research Project in Astronomy/Astrophysics

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

Astrophysics (Collaborative Program)

Program Committee

C. C. Dyer, MSc, PhD/Astronorny & Astrophysics (Director)

J. E. Sipe, BSc, MSc, PhD/Physics

N. w. Murray, BS, PhD, Canada Research Chair/ Theoretical Astrophysics

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E-mail: collab.astrophys@utoronto.ca

Nature of the Collaborative Program

The graduate units of Astronomy and Astrophysics, Physics, and the Canadian Institute for Theoretical Astrophysics participate in the Collaborative M.Sc. Program in Astrophysics. This program fosters graduate education in Astrophysics, particularly in those areas of study that overlap traditional departmental boundaries.

Admission Requirements

Candidates 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. In addition, the applicant must submit a supplementary brief application form to the Collaborative Program Director (available from either home department or the Collaborative Program office). 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 and the home department. This will normally require the equivalent of ten half-courses as follows:

- three or more half-courses in Astronomy and Astrophysics
- three or more half-courses in Physics
- two half-courses from Astronomy and Astrophysics, Physics or a cognate department
- a supervised research project in the field of astrophysics, equivalent to two half-courses

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.

In addition, the student 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.

Upon certification by the Director that all requirements of the Collaborative Program have been fulfilled, the home department will recommend the granting of the M.Sc. degree, and the designation “Completed Collaborative Program in Astrophysics” will appear on the transcript.

Biochemistry BCH

Graduate Faculty

Full Members

K. A. Adeli, BSc, MSc, PhD
L. Attisano, BSc, PhD, Canada Research Chair
R. R. Baker, BSc, PhD
D. P. Bazett-Jones, BSc MSc, PhD
C. E. Bear, BSc, MSc, PhD
R. E. Bishop, BSc PhD
G. W. Brown, BSc, PhD
J. W. Callahan, BSc, MSC, PhD
A. Chakrabartty, BSc MSc, PhD
H. S. Chan, BSc, MA, PhD, Canada Research Chair
D. Clarke, PhD
A. R. Oavidson, BSc PhD
C. M. Deber, BSc PhD
J. Forman-Kay, BSc PhD
J. R. Glover, BSc, MSc, PhD
S. Grinstein, BBcBio, DSc, FRSC, Pitblado Chair in Cell Biology
J. W. Gurd, BA, PhD
C. W. Hogue, BSc, PhD
W. Houry, BSc, MSc, PhD
L. Howell, BSc, PhD
C. J. Ingles, BSc PhD
D. E. Isenman, BSc PhD
A. O. Jorgensen, MSc, PhD
L. Kay, BSc, PhD, Canada Research Chair
F. W. Keeley, BSc, PhD
A. Klip, MSc, PhD, FRSC
P. N. Lewis, BSc PhD
C. A. Lingwood, BSc, PhD
D. H. Maclennan, BSc, MSc, PhD, FRSC, FRS, University Professor
M. Manolson, BS, PhD
L. A. Moran, BSc PhD
E. F. Psi, DrRerNat, Canada Research Chair
J. Parkinson, PhD, BSc
R. Pomes, BEng, PhD, Canada Research Chair
G. Prive, BSc, PhD
D. E. Pulleyblank, BSc PhD
M. L. Rand, BSc, PhD
R. A. Reithmeier, Bsc, PhD (Chair)
J. M. Rini, BSc PhD (Coordinator of Graduate Studies from November 1, 2005)
B. H. Robinson, BSc, PhD, Canada Research Chair
D.. Rotin, BSc, MSc, PhD
J. Segali, BSc, PhD
C. H. Siu, PhD
C. A. Smibert, BSc PhD
J. Sodek, BSc PhD
B. Steipe, MD, PhD
W. S. Trimble, BSc, PhD
A. Volchuk. BSc. PhD. Canada Research Chair
D. B. Williams, Bsc, MSc, PhD (Coordinator of Graduate Studies until October 31, 2005)
S. Wodak, PhD
C. M. Yip, BASc, PhD, PEng, Canada Research Chair

Members Emeriti

R. A. Anwar, BSc, MSc, PhD
A. Bennick, MSc, DDS, PhD, DipPerio
N. Camerman, BSc PhD
V. I. Kalnins, BSc, MSc, PhD
B. G. Lane, BA PhD
H. G. Lawford, BSc, PhD
A. Marks, MD, PhD
M. A. Moscarello, BA, MD, PhD
R. K. Murray, MD, BSc, MSc, PhD
M. A. Packham, PhD, University Professor
R. H. Painter, BSc PhD
J. Reed, BA, MSc, PhD
B. Sarkar, BPharm, MPharm, PhD
H. Schachter, BA, MD, PhD, FRSC
G. R. Williams, BSc, Dr Science

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

Telephone: (416) 978-2702
Fax: (416) 978-8548
E-mail: biochemistry@utoronto.ca
Web: biochemistry.utoronto.ca

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 M.Sc. and Ph.D. 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.

Admission Requirements

Normally we consider applications from students who have at least a B+ average in their last two years of study in an Honours/ Specialist B.Sc. program in Biochemistry/ Molecular Biology as well as from students with strong academic credentials in Honours/ Specialist programs in disciplines related to Biochemistry/Molecular Biology.

In addition applicants must arrange for the completion of personal reference forms from three individuals familiar with their academic performance.

Applicants who obtained a degree outside Canada are generally required to have an M.Sc. 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 and TWE (Essay Writing) scores. The minimum scores required for admission are 580 for the paper-based TOEFL and 237 for the computer-based TOEFL. The TWE or Essay Writing score must be at least 5. A MELAB score of at least 92 is also acceptable.

Degree of Master of Science

Each candidate for the M.Sc. degree must complete any courses that were a condition of acceptance and:

1 complete one session of BCH 2021H Selected Topics in Biochemistry, and
2 participate in BCH 2020Y° Master's Seminar Course in Biochemistry.

Each candidate must present a thesis and successfully complete an oral examination on his or her research and related aspects of biochemistry before being recommended for the degree.

Degree of Doctor of Philosophy

Candidates are accepted into the Ph.D. program through one of three routes:

1 via reclassification from the MSc. program;
2 on completion of an M.Sc. degree in biochemistry or a cognate discipline;
3 directly from a B.Sc. 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.

Candidates for the Ph.D. must complete any courses that were a condition of acceptance and:

1 complete one and one-half internal or external (from cognate departments) graduate-level courses, including at least one session of BCH 2021H Selected Topics in Bochemistry,
2 participate in BCH 2022Y° Doctoral Seminar Course in B/ochemjsfry, and
3 submit a thesis and defend it at a School of Graduate Studies oral examination.

Residence Requirements

Under normal circumstances, M.Sc. and Ph.D. students will be expected to participate as full-time students and to maintain full-time status in their laboratories until thesis completion and final defence.

Collaborative Programs

The Department participates in the following collaborative programs:

1 Biomedical Engineering
2 Biomolecular Structure
3 Developmental Biology
4 Neuroscience
5 Proteomics and Bioinformatics

For more details, consult the separate entries in this calendar.

Courses of Instruction

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

BCH 1422H Cell Surface Biochemistry—Lectures (BCH 422H)*

BCH 1426H Signal Regulating Metabolic Pathways—Lectures (BCH 426H)*

BCH 1440H Protein Biosynthesis - Lectures (BCH 440H)*

BCH 1441H Bioinformatics (BCH 441H)*

BCH 1471Y Advanced Biochemistry—Laboratory (BCH 471Y)* (pre-requisite: 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, 2005: Biomolecular Motion, Theory and Experiment/ Course Coordinators: R. Pomes, L. Kay, L. Howell

Spring, 2006: Chromosome Dynamics and Gene Expression/ Course Coordinators: G. Brown, C. Smibert

Fall, 2006: Signalling: From Membrane to Nucleus/Course Coordinators: D. Rofin, M. Moran

Spring, 2007: Structural Biology of Membrane Proteins Linked to Disease/Course Coordinators: G. Prive, C. Bear

*Listing in the Faculty of Arts and Science (course description).

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

BCH 2022Y°	Doctoral Seminar Course in Biochemistry (Credit/No Credit)
JBB 1425H	Biophysical Methods—Lectures (BCH 425H)*
JBB 2025H	Protein Crystallography—Lectures/Joint course offered by the staff of Biochemistry, Medical Biophysics, and Molecular and Medical Genetics (Available Spring 2006)
JBB 2026H	Protein Structure, Folding and Design (Not available Fall 2005)
JBI 1428H	Molecular Immunology—Lectures (JBI 428H)*/Joint course offered by staff of Biochemistry and Immunology
JBL 1507H	Biochemistry of Inherited Disease/Joint course offered by staff of Biochemistry and Clinical Biochemistry
JNP 1017H+	Molecular and Biochemical Basis of Toxicology/Course Coordinator: P. J. O'Brien, Pharmacy
JNP 1018H+	Current Topics in Molecular and Biochemical Toxicology/Course Coordinator: P. J. O'Brien
JNR 1444Y	Fundamentals of Neuroscience: Cellular and Molecular—Lectures (PSL 444Y)*/Joint course offered by Staff of Biochemistry, Pharmacology, and Physiology (Available 2005-2006)
JTB 2010H	Proteomics and Functional Genomics (Available Fall 2005)
JTB 2020H	Applied Bioinformatics (Available Spring 2006)

* Listing in the Faculty of Arts and Science (course description).
+ Extended course. For academic reasons, course work is extended into session following academic session in which course is offered.

Bioethics

Graduate study in bioethics at the University of Toronto is offered in two streams:
1 Collaborative Program in Bioethics
2 Master of Health Science in Bioethics
The Collaborative Program in Bioethics is a research-stream program (master's and doctoral). The Master of Health Science in Bioethics is a professional-stream master's program.

Full details on both programs appear below.

Address:
Joint Centre for Bioethics (JCB)
88 College Street
University of Toronto
Toronto, Ontario
Canada
M5G 1L4

Telephone: (416) 978-0871
Fax: (416) 978-1911
E-mail: carmen.alfred@utoronto.ca

COLLABORATIVE PROGRAM IN BIOETHICS
Web: www.utoronto.ca/jcb/main.html
>Education
>Graduate Studies
>Collaborative Program in Bioethics

Program Committee

D. K. Martin, BSc, PhD/Health Policy, Management & Evaluation
T. Lemmens, LicJur, LLM(Bioethics),DCL/Law
E. H. Peter, MsN,PhD/Nursing Science
J. Hawkins, BA, MA ,PhD/Philosophy
N. M. Lazar, MD, BSdMedical Science
A. Daar, DPhil, FRCP(Lond), FRCS, FRCS(C)/Public Health Sciences, Medical Science
B. Secker, BA, MA, PhD/Rehabilitation Science (Director)
D. Novak, AB, MHL, rabbinical diploma, PhD/Religion

The graduate units of Health Policy, Management and Evaluation; Law; Medical Science; Nursing Science; Philosophy; Public Health Sciences; and Religion collaborate to offer master's (LL.M., M.A., M.H.Sc., M.N., M.Sc.) and doctoral (Ph.D., S.J.D.) programs in Bioethics.

Students with an interest in bioethics register in one of the graduate units associated with the Collaborative Program in Bioethics (CPB). Successful candidates who complete the requirements of the home graduate unit and the CPB are awarded a degree from the home unit, and the notation "Completed Collaborative Program in Bioethics" will appear on their transcripts.

Admission Requirements

Candidates 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. Candidates for master's and 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.

Application Process

A CPB application form, available on the Web, must be completed and sent to the Secretary, Collaborative Program in Bioethics. Applicants should check with individual home units for each unit's application deadline date. The dealine for CPB applications is March 31. The application must be accompanied by:
1 an up-to-date curriculum vitae;
2 up-to-date copies of all transcripts;
3 a one-page letter of intent (outlining research the applicant plans to conduct, reasons why the project was chosen, and what research methodology will be used to complete the project); and
4 two letters of reference.

If a candidate applies to more than one unit, a copy of each file must be submitted to the Secretary, Collaborative Program in Bioethics.

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:
1 PHL 2145H—a review of the philosophical foundations of bioethics.
2 MSC 3001Y–issues and case studies in bioethics.
3 One half-course, normally from the home unit; see suggested list below.

All doctoral candidates must complete a thesis. 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. Thesis supervisors must have appointments to the graduate faculty and will normally be members of the Bioethics Collaborative Program Committee. Ordinarily members of the thesis committee and examining professors (or other professionals) are drawn

from other relevant disciplines. 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, and requirements for such projects will be determined by the home unit.

Courses of Instruction

Please note that these courses are not offered every year. Consult each unit's Web site for details.

Health Policy, Management and Evaluation

HAD 5010H Canada's Health System and Health Policy: Part I
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

LAW 267H Medical Jurisprudence
LAW 404H Health System Law and Policy
LAW 411H Research Involving Humans: Ethics, Law and Regulation

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 1013H Transcultural Health Care Issues
NUR 1021H Nursing Ethics
NUR 1024H Qualitative Research: Foundations, Methods, and Designs

Philosophy

PHL 2131H Ethics
PHL 2132H Seminar in Ethics
PHL 2133H Topics in Ethics

Public Health Sciences

CHL 5111H Qualitative Research Methods
CHL 5401H Epidemiology Methods I
CHL 5411H International Health

Religion

RLG 2007H Ethics, Society, and Technology
RLG 2018H Religion and Bioethics

MASTER OF HEALTH SCIENCE IN BIOETHICS

Web: www.utoronto.ca/jcb/main.htm
>Education
>Graduate Studies
>Master of Health Science in Bioethics

Program Director

P.A. Singer, MD, MPH, FRCPC/Medical Science

The M.H.Sc. in Bioethics is among the first of its kind in North America and is offered through the Institute of Medical Science (IMS). Designed for practitioners who wish to augment their knowledge and skills in bioethics, the program assists them in their roles as clinician-teachers and as members of bioethics committees. It is a course-only, professional master's degree program. The M.H.Sc. in Bioethics provides the theoretical, methodological, and applied skills requisite for health care professionals to face the bioethical challenges posed by modern health care. Students interested in a research-stream program should consider the Collaborative Program in Bioethics (CPB).

Admission Requirements

Typically, entry into the M.H.Sc. in Bioethics Program requires four years of undergraduate study and a recognized degree in one of the health care sciences (for example, M.D., B.Sc.N., B.Sc.OT, B.Sc.PT, B.S.W.) or equivalent. Applicants from other disciplines will be considered on a case-by-case basis depending on the availability of space and the ability to meet School of Graduate Studies (SGS) and IMS standards. The Program favours individuals with outstanding academic credentials.

Applicants must have sufficient free professional time to attend and to prepare for 10 sessions of two full days of instruction per month (September to April, estimated as one day per week) and have an employment and/or volunteer background that reflects significant interest in bioethics (broadly construed as a multidisciplinary enterprise).

There must be great likelihood that the applicant will provide significant bioethics leadership in his or her home institution or local community upon completion of the M.H.Sc. in Bioethics.

Applicants must demonstrate evidence of scholarly ability and personal maturity. Students are expected to maintain good academic standing in all components of the program.

Application Process

Applicants are accepted under the general regulations of both IMS and SGS. Meeting the minimal requirements is mandatory but does not guarantee acceptance.

Complete applications must be sent to:
Carmen Alfred
Academic Secretary, M.H.Sc. in Bioethics
University of Toronto Joint Centre for Bioethics
88 College Street
Toronto, Ontario
Canada
M5G 1L4

The application must include:

1 completed application form (available on the Joint Centre for Bioethics Web site);
2 current curriculum vitae;
3 two sets of complete, up-to-date, original university academic transcripts in separate sealed and signed envelopes;
4 a letter of intent or professional goals, no longer than 1000 words, in which applicants
a outline reasons for pursuing admission to the M.H.Sc. in Bioethics;
b briefly explain how their background has prepared them for work in bioethics;
c provide an estimate of any remaining background preparation that must be undertaken to prepare for this course of study (e.g., courses, program, etc. to be completed, and where, before the September session meets);
d identify main area(s) of bioethical interest; and
e explain how they will use their graduate education in bioethics in the home institution.
5 letters of recommendation from three referees attesting to the applicant's skills, knowledge, and character (academic preparation and capacity; capacities for interpersonal and collegial study, research and practice). One letter need not cover all aspects of these requirements, but all three together must do so. In the case of international applicants, one of these three letters must be from a mentor who will supervise the applicant in the home country;
6 if the applicant is currently employed by an institution (health care or otherwise), a letter from a senior administrator in the institution (for example, Department Chair, Dean, Hospital CEO or VP) agreeing to provide the necessary professional release time to complete the program and clarifying the institution's view of how the applicant's graduate education will assist the development of bioethics in the home institution. In the case of international applicants, this letter must also state agreement to provide a leadership position in bioethics for the

applicant upon return to the institution in the home country;
7 a writing sample, in English, that demonstrates the applicant's analytical and argumentative skills, preferably in bioethics.
8 a completed SGS application form.

Deadline for receipt of applications, including SGS application form, is February 1.

Enrolment is limited and not all applicants will be admitted even if the prerequisites are met. Typically, 12 students are accepted. Once applications are received, applicants will be screened for eligibility into the Program. Short-listed applicants will be interviewed in April/May; successful applicants will be notified following the interview.

Program of Study

The M.H.Sc. in Bioethics is offered in modular format in 20 two-day Thursday/Friday blocks from September to April to accommodate the needs of those who wish to continue clinical practice yet engage in full-time graduate study, and to attract practitioners not only locally but also throughout Ontario and across Canada. Certain international students complete all course work in one academic year. The program provides practical experience strongly informed by theory that includes education, research, and clinical components. The curriculum directly reflects the functional needs of clinician-teachers or bioethics case consultants.

First-year courses concentrate on theoretical foundations of health care sciences, philosophical medical ethics, and resource allocation and law and their application in the clinical setting.

Second-year courses focus on applied skills and knowledge concentrating on teaching in a variety of settings to a variety of audiences; managing differences in culture, gender, and religion; the mediation skills with which to work; further instruction in the two primary areas of clinical bioethics and research ethics; the preparation of a major paper of publishable quality in an area or on an issue of the student's choice; and a practicum that will ensure the application of the knowledge and skills gained elsewhere in the two-year program of study.

Required Courses

Courses are restricted to students officially enrolled in the M.H.Sc. in Bioethics and the Collaborative Program in Bioethics, except where noted. All courses are understood as "or equivalent" in order to accommodate the diverse background education and training of applicants.

First year

HAD 5771H Resource Allocation Ethics
LAW 257H Legal Approaches to Bioethics
MSC 3001Y Foundations Seminar I
MSC 3003Y Empirical Approaches in 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

JOINT CENTRE FOR BIOETHICS

Web: www.utoronto.ca/jcb

Both the Collaborative Program in Bioethics and the M.H.Sc. in Bioethics are associated with the University of Toronto Joint Centre for Bioethics (JCB). Students are encouraged to take advantage of the various activities at the JCB. These include a weekly Bioethics Seminar, lectures by visiting professors, the opportunity to participate in hospital ethics committees and clinical ethics consultations, interest groups, rounds, and colloquia on new developments. Students in the CPB meet regularly to present and discuss their individual research topics and to maintain the collaborative nature of the program.

Biomedical Communications

Graduate Faculty

Full Members
D. De Kerckhove, BA, MA, PhD, Dip 3ème Cycle, FRSC
C. J. Lumsden, BSc, MSc, PhD
J. L. Semple, BSc, MSc, MD, FRCS(C)
P. A. Stewart, BSc, MSc, PhD
I.M. Taylor, MBChB, MD

Associate Members
M. Dryer, BA, MSc, BMC
J. Jenkinson, BA, MScBMC
L. R. Lax, BScAAM, MEd
M. B. Mackay, ANSCA, BScAAM
D. M. Mazierski, BScAAM
S. Nancekivell, MA
L. A. Wilson-Pauwels, AOCA, BScAAM, MEd, EdD *(Director)*
N. Woolridge, BFA, BScBMC, MSc

Address:
Program in Biomedical Communications
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Fa: (416) 978-6891
E-mail: bmchfo@utoronto.ca
Web: www.bmc.med.utoronto.ca/BMC/

The two-year Master of Science in Biomedical Communications (M.Sc.BMC) professional graduate degree program is offered through the Institute of Medical Science. Applicants with interdisciplinary art and science backgrounds develop the necessary skills to become outstanding visual communicators in the health sciences. BMC graduates work in a variety of areas such as health science centres, industry, academia and/or research, or as private consultants in these areas.

While in the program, students produce visual material that synthesizes scientific data and medical processes. Popular specializations are the creation and evaluation of interactive, computer-based multimedia programs and animation for teaching and learning. Presently there are two fields offered in the graduate program:

1 Biomedical Media Design is concerned with the creation and evaluation of media-based tools (video, interactive media, CD-ROM, DVD, Web) for teaching and learning. A human centred design approach, guided by principles of information hierarchy and target audience analysis, is a foundation for the development and evaluation of these materials.

2 Biomedical 3-D Visualization Design involves the creation of full-motion visualizations of biological structures, events, and processes at scales ranging from the molecular to gross anatomic. These visualizations can be interpretative, fulfilling an explanatory role, or they can be driven by computational models or empirical datasets. Close attention is paid to the effective communication of complex information through narrative and cinematic design.

Admission Requirements
Candidates are admitted under the general regulations of SGS and must have graduated from a recognized university with a minimum of a four-year undergraduate degree. This degree should include a variety of courses in the arts, sciences, and humanities. Applicants must have obtained at least a mid-B standing (73-76% or 3.0 based on a 4-point scale) in their final two years of undergraduate study. A high-quality portfolio of visual material is required. Consult the M.Sc.BMC Web site for the list of prerequisite courses required for admission.

Program Requirements
The M.Sc.BMC program consists of 17 half-course equivalents. Students have the option to select either two elective half-course equivalents and a master's research project and paper or four elective half-course equivalents and a master's project.

In Year II of the graduate program, students enter their chosen field.

Courses of Instruction
Faculty should be consulted each session as to course offerings.

Required Courses
LMP 1012H Seminars on Pathology/ C. Sherman
MSC 1001Y Human Anatomy (Including Embryology) /I. M. Taylor
MSC 2001Y Visual Representation of Medical Knowledge/L. Wilson-Pauwels, Staff
MSC 2002Y Sequential Medical Communication/L. Lax, Staff
MSC 2003Y Biomedical Communications Technologies/N. Woolridge, D. Mazierski
MSC 2004H Research Methods/S. Nancekivell

MSC 2005H Evolution of Medical Illustration/ M. B. Mackay, Staff
MSC 2009H Ethics and Professionalism in Biomedical Communications (Credit/No Credit)/L. Wilson-Pauwels
MSC 2012H Neuroanatomy for Visual Communication/I. M. Taylor
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/C. Lumsden
MSC 2016H+Visualization Methods/ N. Woolridge
MSC 2017H+Visualization Technology/ N. Woolridge
MSC 2006H Advanced Media Design Technologies/ N. Woolridge, J. Jenkinson
MSC 2007H Visual Synthesis of Medical/ Scientific Process/ L. Wilson-Pauwels
MSC 2008H Community-Centred Design Research/J. Jenkinson
MSC 2011H Special Topics in Biomedical Communications/Staff

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

Biomedical Engineering BME

Graduate Faculty

Full Members

S. L. Adamson, BSc, MSc, PhD
H. L. Atwood, BA, MA, PhD, DSc, FRSC
J. E. Aubin, BSc PhD
J. Audet, MASc, PhD
B. L. Bardakjian, BEd, BSc MASc, PhD, PEng
E. R. Bogoch, BA, MSc, MD, PhD
L. Boynton, MD, FRCP(C)
W.C.W. Chan, BSc, PhD
T. Chau, BASc, MASc, PhD
Y. L. Cheng, SB, SM, PhD
D. W. Courtman, BSc, MSc, PhD
D. G. Cvitkovitch, BSc, MSc, PhD, Canada Research Chair
J. Davies, BSc, PhD, BDS, DSc
S. W. Davies, BSc, MSc, PhD, MBA
A. C. Easty, BSc, PhD, PEng, CCE
M. Eizenman, BASc, MASc, PhD
C. R. Ethier, BSc, MMath, SM, PhD, PEng, Canada Research Chair
G. R. Fernie, BSc, PhD, PEng, CCE
R. Frecker, BSc, MD, PhD, LMCC
A. E. Gross, PhD, MD
M. D. Grynpas, MSc, PhD
R. V. Harrison, BSc, PhD, DSc
K. W. Johnston, MD, FRCS(C), FRCP(C)
M. Joy, BSc, MASc, PhD, PEng (Associate Director and Coordinator of Graduate Studies)
R. Kandel, MD, FRCP(C)
A. Khouw, MB, BCh
H. Kunov, MSc, PhD, PEng
H. C. Kwan, BASc, MSc, PhD
D. Li, BASc, MSc, PhD
M. Milner, BSc, PhD
S. Naumann, BSc MSC, PhD
K. H. Norwich, BSc, MSc, MD, PhD
M. Ojha, BSc, MSc, PhD
R. M. Pilliar, BASc, PhD, PEng
M. R. Popovic, MSc, MASc, PhD
K. P. H. Pritzker, BSc, MD, FRCP(C)
D. T. Reid, BSc(OT), MEd, PhD
J. P. Santerre, BSc, MScEng, PhD
M. V. Sefton, BASc, ScD, FClC (Director)
M. S. Shoichet, SB, MS, PhD, Canada Research Chair
M. Silverman, BSc, MDCH, FRCP(C)
F. K. Skinner, BMath, MASc, PhD
A. S. Slutsky, BASc, MASc, MD, PhD
W. L. Stanford, PhD, BA
B. H. Strauss, MD
Y. Sun, BS, MS, PhD
J. Thorpe, BASc, MASc, PhD
P. Y. Wang, BSc, PhD
C. A. Ward, BS, PhD, PEng
K. Woodhouse, BEng, PhD, PEng
C. M. Yip, BASc, PhD, PEng, Canada Research Chair
P. Zandstra, BEng, PhD, Canada Research Chair

Members Emeriti

R. S. C. Cobbold, BSc, MSc, PhD, FRSC
A. M. Dolan, Bsc, MSc

Associate Members

H. C. Cameron
X. J. Chen, BSc, MA, PhD
C. Gemmell, PhD, MD
D. J. Howarth, PhD
H. B. Michaels, BASc, MSc, PhD
A. Mihailidis, BAS, MASc, PhD, PEng
F. Shein, BSc, MEng, PhD
J. G. Sled, BSc , MSc, PhD
R. N. S. Sodhi, Bsc, MSc, PhD
P. A. Watson, DDS, MScD
J. L. Winslow, PhD

Address:
Institute of Biomaterials and Biomedical Engineering
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4 Taddle Creek Road
University of Toronto
Toronto, Ontario
Canada
M5S 3G9

Telephone: (416) 978-4841
Fax: (416) 978-4317
E-mail: admissions.ibbme@utorontoxa
Web: www.ibbme.utoronto.ca

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, proteomics and bioinformatics.

Admission Requirements

An applicant must be a graduate in dentistry, engineering, medicine, or one of the physical or biological sciences and may be accepted as a graduate student in the Institute of Biomaterials and Biomedical Engineering. Alternatively, students may choose to register in the Collaborative Program in Biomedical Engineering through a collaborating graduate department. See Biomedical Engineering (Collaborative Program) entry in this calendar.

Program Requirements

Students who wish to register in the Biomedical Engineering Program or the Clinical Biomedical Engineering Program will register in the School of Graduate Studies through the Institute of Biomaterials and Biomedical Engineering and will meet all respective degree requirements as described by the School of Graduate Studies.

As part of these requirements, engineering and physical science students will be required to take a life sciences course, such as JPB 1022H (or an equivalent); while life science students will be expected to take a physical sciences course, such as JPB 1055H (or an equivalent). Students will pursue a thesis topic relevant to Biomedical Engineering and will be expected to take BME 1450H *Bioengineering Science.*

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

Degree of Master of Applied Science

The work leading to the degree of Master of Applied Science (M.A.Sc.) provides an opportunity for the student to pursue advanced studies in biomedical engineering and the opportunity to engage in research. The program of study will normally comprise at least four half-courses, including BME 1450H and an appropriate life science or engineering course, and the successful completion of a thesis in the biomedical engineering field. It is anticipated that students will complete all degree requirements within 18-24 months.

For students choosing the Clinical Engineering stream, the program of study will include BME 4444Y *Practice in Clinical Engineering.*

Degree of Master of Health Science, Clinical Biomedical Engineering

A program in Clinical Biomedical Engineering, leading to the degree of Master of Health Science (M.H.Sc.), is offered to selected students who hold the degree of Bachelor of Applied Science of this University or an equivalent degree in engineering. The program normally includes ten half-courses, including one full course, which involves periods of internships in health care facilities, and a research project. All requirements for the degree must be completed within three years. No more than five students will be admitted each year.

The program requirements for the Degree of Master of Health Science, Clinical Biomedical Engineering, are being revised. Students who wish to be considered for this program should apply to the M.A.Sc. program and contact admissions.ibbme@utoronto.ca.

Degree of Doctor of Philosophy

Candidates are normally admitted to the Ph.D. program after completing the master's program; however, direct admission to the Ph.D. program may be considered in exceptional cases. The program of study for each candidate in Biomedical Engineering normally comprises at least four half-courses and successful completion of a thesis, representing an original investigation in biomedical engineering.

Collaborative Programs

The Institute participates in the following collaborative programs:

1 Addiction Studies
2 Biomedical Engineering
3 Cardiovascular Sciences
4 Health Care, Technology and Place
5 Neuroscience

For more details, consult the separate entries in this calendar.

Courses of Instruction

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/A. M. Dolan, Staff
BME 1430H Mathematical Theory of Tracer Kinetics/K. H. Norwich
BME 1436H Clinical Engineering/A. M. Dolan, Staff
BME 1439H Clinical Engineering Instrumentation II/. M, Dolan, Staff
BME 1445H Special Topics in Clinical Engineering/A. M. Dolan, Coordinator
BME 1446H Transduction of Physiological Events/A. M. Dolan
BME 1450H Bioengineering Science/S. Davies
BME 1452H Signal Processing for Bioengineering/S. Davies
BME 1453H Cell and Tissue Engineering/ P, Zandstra
BME 1454H Regenerative Medicine/ W. Stanford
BME 1456H Changing Health Care Technologies, People, and Places/ G. Fernie
BME 1457H Biomedical Nanotechnology/ W. Chan
BME 4444Y+ Practice in Clinical Engineering/ A. M. Dolan
JCB 1349H Molecular Assemblies: Structure/ Function/Properties/C. M. Yip
JEB 1365H Ultrasound: Theory and Applications in Biology and Medicine/R. S. C. Cobbold
JEB 1375H Practical Optimization/B. L. Bardakjian
JEB 1433H Medical Imaging/M. L. G. Joy
JEB 1444H Neural Engineering/B. L. Bardakjian
JEB 1447H Sensory Communications/ W. Wong
JEB 1451H Cellular Bioelectricity/B. L. Bardakjian
JPB 1022H Human Physiology as Related to Biomedical Engineering/A. M. Dolan, Coordinator
JPB 1055H Bioengineering for Life Scientists/ A.M. Dolan, Coordinator
JTC 1331H Biomaterials Science/M. V. Sefton
MBP 1007H Fundamentals in Molecular and Cell Biology I/J. Gariepy, Staff
MBP 1008H Fundamentals in Molecular and Cell Biology II/J. Gariepy Staff
MBP 1022H Advanced Cell Biology for Physical Scientists/D. Dumont
PSL 1052H Fundamentals of Ion Channel Function/P Back, Staff
ZOO 1002H Advanced Research and Reading Course/Staff

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

Biomedical Engineering (Collaborative Program)

Program Committee

P. N. Lewis, BSc, PhD/Biochemistry
A. M. Dolan, BSc, MSc/Biomedicai Engineering
M. Joy, BSc, MASc, PhD, PEng/Biomedical Engineering (Associate Director and Coordinator of Graduate Studies)
M. V. Sefton, BASc, ScD, FCIC/Biomedical Engineering (Director)
Y. L. Cheng, SB, SM, PhD/Chemicla Engineering & Applied Chemistry
J. P. Santerre, BSc, MScEng, PhD/Dentistry
S. G. Zaky, BSc, MASc, PhD, PEng/Electrical & Computer Engineering
S. R. Dittakavi, BSc, MSc, PhD/Laboratory Medicine & Pathobiology
Z. Wang, BEng, MSc, PhD/Materials Science & Engineering
J. S. Wallace, BSME, BA, MSE, PhD, PEng/Mechanical & industrial Engineering
R. A. Reithmeier, BSc, PhD/Medical Science
K. S. Pang, BScPhm, PhD/Pharmaceutical Sciences
J. E. Sipe, BSc, MSc, PhD/Physics
U. De Boni, BSc, MSc, PhD/Physiology
D. T. Reid, BSc(OT), MEd, PhD/Rehabilitation Science

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The graduate units of Biomedical Engineering; Biochemistry; Chemical Engineering and Applied Chemistry; Dentistry; Electrical and Computer Engineering; Laboratory Medicine and Pathobiology; Materials Science and Engineering; Mechanical and Industrial Engineering; Medical Science; Pharmaceutical Sciences; Physics; Physiology; and Rehabilitation Science 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. 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. 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.

Admission Requirements

Candidates 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. Candidates for this program must be graduates in dentistry, engineering, engineering science, medicine, or one of the physical or biological sciences and may be accepted in the Collaborative Program in Biomedical Engineering at the Institute of Biomaterials and Biomedical Engineering (IBBME) through one of the collaborating graduate departments (home department).

Program Requirements

Students register in the School of Graduate Studies through their home departments; 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); while 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 10101H *Graduate Seminar* series and JDE 1000H *Ethics in Research.*

Each master's student in the Collaborative Program is 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 candidate registered in the Collaborative Program must meet the requirements of the collaborating department and will normally comprise at least four half-courses and a thesis in the biomedical field.

Before Ph.D. candidates are accepted, the Program Committee must be satisfied with the student's ability to undertake advanced graduate studies. A qualifying examination may be required by the collaborating department. Direct transfer to a Ph.D. program is possible subject to the requirements of the collaborating department. The program of study for each Ph.D. candidate 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 four half-courses and a thesis.

Each Ph.D. 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 both master's and 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.

Biomedical Engineering Program

Consult the separate entry in this calendar or contact IBBME for details.

Courses of Instruction

Not all courses are offered every year. Students should contact the Institute office.

BME 1010H Graduate Seminar
BME 1011H Graduate Seminar
BME 1405H Clinical Engineering Instrumentation I/A. M. Dolan, Staff
BME 1430H Mathematical Theory of Tracer Kinetics/K. H. Norwich
BME 1436H Clinical Engineering/A. M. Dolan, Staff
BME 1439H Clinical Engineering Instrumentation II/A. M. Dolan, Staff
BME 1445H Special Topics in Clinical Engineering/A. M. Dolan, Coordinator
BME 1446H Transduction of Physiological Events/A. M. Dolan
BME 1450H Bioengineering Science/ S. Davies
BME 1452H Signal Processing for Bioengineering/S. Davies
BME 1453H Cell and Tissue Engineering/ P. Zandstra
BME 1454H Regenerative Medicine/ W. Stanford
BME 1456H Changing Health Care Technologies, People, and Places/ G. Fernie
BME 1457H Biomedical Nanotechnology/ W. Chan
BME 4444Y+ Practice in Clinical Engineering/ A. M. Dolan
CHE 1107H Applied Mathematics/Staff
CHE 1138H Mathematical Methods in Chemical Engineering/R. Luus
CHE 1141H Advanced Chemical Reaction Engineering/B.A. Saville, Coordinator
CHE 1143H Transport Phenomena/D. C. S. Kuhn
CHE 1145H Advanced Chemical Analysis/ S. T. Balke
CHE 1304H Polymer Mechanics and Rheology/C. E. Chaffey
CHE 1310H Chemical Properties of Polymers/M. V. Sefton
DEN 1070H Advances in Dental Materials Science/J. P. Santerre, Staff
DEN 1081H Bone Interfacing Implants/ J. E. D. Davies, M. Mittelman, R. M. Pilliar
ECE 1228H Electromagnetic Theory/K. G. Balmain
ECE 1352H Analog Circuit Design I/K. W. Martin
ECE 1502H Information Theory/F. R. Kschischang
ECE 1511H Signal Processing/A. N. Venetsanopoulos
ECE 1512H Digital Image Processing and Applications/A. N. Venetsanopoulos
ECE 1514H Spectral Analysis and Array Processing/ D. Hatzinakos
ECE 1521H Statistical Communication Theory/S. Pasupathy
ECE 1647H Nonlinear Control System Analysis/S. A. Bortoff
JCB 1349H Molecular Assemblies: Structure/Function/Properties/C.M. Yip

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

JEB 1365H Ultrasound: Theory and Applications in Biology and Medicine/ R. S. C. Cobbold
JEB 1375H Practical Optimization/B. L. Bardakjian
JEB 1433H Medical Irnaging/M. L. G. Joy
JEB 1444H Neural Engineering/B. L. Bardakjian
JEB 1447H Sensory Communications/ W. Wong
JEB 1451H Cellular Bioelectricity/B. L. Bardakjian
JNP 1017H+ Molecular and Biochemical Basis of Toxicology/P. J. O'Brien, Staff
JNP 1018H+ Current Topics in Molecular and Biochemical Toxicology/P. J. O'Brien, Staff
JNR 1444Y Fundamentals of Neuroscience: Cellular and Molecular/L. Mills, J. Eubanks, Staff
JNS 1000Y Fundamentals of Neuroscience: Systems and Behaviour/ O. Broussard, Staff
JNS 1001H Neuroanatomy of Mind
JNS 1010H Analytical Neuroscience/ J. Winslow
JPB 1022H Human Physiology as Related to Biomedical Engineering/ A. M. Dolan, Coordinator
JPB 1055H Bioengineering for Life Scientists/ A. M. Dolan, Coordinator
JTC 1135H Applied Surface Chemistry/C. A. Mims, R. N. S. Sodhi
JTC 1331H Biomaterials Science/M. V. Sefton
MBP 1007H Fundamentals in Molecular and Cell Biology I/J. Gariepy, Staff
MBP 1008H Fundamentals in Molecular and Cell Biology II/J. Gariepy, Staff
MBP 1022H Advanced Cell Biology for Physical Scientists/D. Dumont
MIE 1001H Dynamics II/J. W. Zu
MIE 1062H Robot Kinematics and Dynamics/ A. A. Goldberg
MIE 1101H Thermodynamics II/C. A. Ward
MIE 1109H Surface Phenomena/A. W. Neumann
MIE 1201H Fluid Mechanics III/I. G. Currie
MIE 1405H Human Control of Telerobotic Systems/P. Milgrarn
MIE 1729H Machine Perception and Robot Sensors/Staff
MIE 1806H Introduction to Digital Image Processing and Analysis/Staff
MMS 1026H Analytical Electron Microscopy/ D. D. Perovic
PHM 1108H Advanced Pharmacokinetics II/ K. S. Pang, J. J. Thiessen, L. Endrenyi
PHM 1109H Recent Developments in Dosage Form Design/X. Y. Wu
PHM 1110H Chemical Basis of Drug Metabolism/P. Utrecht, Staff
PHM 1117H DNA-Drug Interactions/R. B. MacGregor
PSL 1432H Theoretical Physiology/D. Tweed
PSL 1052H Fundamentals of Ion Channel Function/P Back, Staff
REH 1100H Theory and Research in Rehabilitation/M. Verrier
REH 1540H Rehabilitation Technology/D. T. Reid, G. Femie

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

Biomolecular Structure (Collaborative Program)

Program Committee

J. Forman-Kay, BSc, PhD/Biochemistry
G. A. Woolley, BSc, PhD/Chemistry
D. Rose, BA, PhD/Medical Biophysics
L. Kay, BSc, PhD, Canada Research Chair/Molecular & Medical Genetics, Biochemistry, Chemistry
J. M. Rini, BSc, PhD/Molecular & Medical Genetics, Biochemistry (Coordinator)

Address:
J. M. Rini, Coordinator
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The graduate program in Biomolecular Structure is a collaborative program involving the Departments of Biochemistry, Chemistry, Medical Biophysics, and Molecular and Medical Genetics. The program is open to Ph.D. students wishing to train under the supervision of one of the participating investigators. The program will appeal to students with a wide variety of backgrounds.

Admission Requirements

Candidates 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

Students in the program will be required to take JBB 2026H *Protein Structure, Folding and Design* and an additional half-course in a specialized topic. Moreover, students are expected to participate in the Biomolecular Structure Program seminar series.

Generally, students enrolled in the program will be expected to fulfil the course requirements of both the program and the home department. However, it is anticipated that in most cases course work required by the program will serve, in part, to fulfil departmental requirements.

Courses of Instruction

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

Biotechnology BTC

Program Faculty

G. S. Espie, PhD/Botany
B. J. Saville, MSc, PhD/Botany
U. J. Krull, BSc, MSc, PhD, AstraZeneca Professor of Biotechnology/Chemistry
S. Prosser, BSc, MSc, PhD/Chemistry
T. Astebro, MSc, TECH.LIC., PhD/Management
H. P. Gunz, BSc, DPhil, PhD/Management
M. Tombak, BASc, MBA, AM, PhD/Management
(Interim Director)
B. A. Lange, BSc PhD/Zoology
J. T. Westwood, BSc, MSc, PhD/Zoology

Additional faculty are selected from the Departments of Botany, Chemistry, Zoology, the Rotman School of Management, related departments, as well as experts from industry and government.

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Web: www.utm.utoronto.ca/mbiotech

Introduction

The Master of Biotechnology (M.Biotech.) program is an interdisciplinary course-based professional degree involving collaboration between the Departments of Botany, Chemistry, Zoology, and the Rotman School of Management.

Students in the M.Biotech. program come from wide and varied backgrounds with the common goal of pursuing a career in the biotechnology or the pharmaceutical industries. The program is designed to meet the evolving needs of students and this global industry. Faculty is drawn from the Departments of Botany, Chemistry, and Zoology, and from the University of Toronto Rotman School of 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.

Admission Requirements

1 A four-year bachelor's degree or its equivalent in any area of biological sciences, chemistry, or related field.
2 Acceptable GMAT or GRE scores and/or marks of A- or better in the last two years of study.
3 Applicants will be asked to participate in and be interviewed during "biotechnology week and, if unable to attend, will be required to submit additional information as requested by the Admissions Committee.

The Committee, comprising representatives from the three participating departments, makes admission decisions.

Program Requirements

The program is a full-time, course-based masters degree which is launched during the month of May each year.
Students are required to complete 8 full graduate courses over a 24-month period:

- 5 to 6 science credits (includes credits for Seminar and Placement)
- 2 business credits
- up to 1 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 of Instruction

Required

A general description of each required course is posted on the Web site, www.utm.utoronto.ca/mbiotech.

BTC 1600H	Seminar in Biosciences/Biotechnology
BTC 1601H	Seminar in Biosciences/Biotechnology
BTC 1701H	Genetics and Molecular Biology Laboratory
BTC 1702H	Protein Chemistry/Biotechnology Laboratory
BTC 1801H	Biological Controls and Production of Natural Products
BTC 1802H	Biotechnology in Agriculture
BTC 1803H	Biotechnology in Medicine
BTC 1900Y	Placement Project in Biosciences/Biotechnology
BTC 1901Y	Placement Project in Biosciences/Biotechnology
BTC 2000H	Organizational Skills
BTC 2001H	Science, Technology, Organizations and Society
BTC 2002Y	Management of Innovation

Elective Courses

BTC 1902Y Placement Project in Biosciences/Biotechnology

Other graduate courses approved by the Program Director

Book History and Print Culture (Collaborative Program)

Program Committee

D. I. Galbraith, BA, MA, PhD/English (Director)
M. Korey, AB, MS/English, Massey College
E. P. Fleming, BA BLS, MLS, MA, PhD, FRSM Information Studies
W. R. Robins, BA, MPhil, PhD/Medieval Studies
P. Brown//English (Student Representative)

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Fax: (416) 978-1759
E-mail: book.history@utoronto.ca
Web: bookhistory.fis.utoronto.ca

Nature of the Collaborative Program

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 departments of English, French Language and Literature, History, History of Art, Italian Studies, the Faculty of Information Studies, the Faculty of Music, the Institute for the History and Philosophy of Science and Technology, the Centre for Medieval Studies, and the Centre for Comparative Literature, 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.''

Application Procedures

Candidates 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). Candidates apply to the Collaborative Program by writing 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, though late applications will also be considered. 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 will do.) Advice is available from the Director and the Program Committee. An interview will normally form part of the admissions procedure for doctoral candidates.

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

Master's Program

All candidates must fulfil 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 the master's level, the program should include at least two full-course equivalents 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.

Doctoral Program

All candidates must fulfil the degree requirements of the unit in which they are enrolled. Their program of study must also be approved by the BHPC Program Committee. If they 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 two doctoral courses BKS 2000H and BKS 2001H. 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 Ph.D.

Core 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.

Botany BOT

Graduate Faculty

Full Members

M. G. AbouHaidar, BSc, PhD, Dip d E Sup, CAP
J. B. Anderson, BA, PhD
S.C. H. Barrett, BSc, PhD, Canada Research Chair
B. W. Berleth, PhD
T. J. Blake, BScF, STB, MF, PhD, DipFor
T. J. Carleton, BSc MSc, PhD
D. Christendat, BSc, PhD
J. R. Coleman, BSc PhD
R. A. Collins, BSc, PhD, Canada Research Chair
W. R. Cummins, BSc PhD
S. R. Cutler, BSc, MSc, PhD, Canada Research Chair
D. Desveaux
T. A. Dickinson, BSc, MSc, PhD
F. DiCosmo, BSc, PhD
M. S. V. Douglas, BSc, MSc, PhD
J. E. Eckenwalder, BA, PhD
(Coordinator of Graduate Studies)
E. A. Edwards, BEng, MEng, PhD, PEng
G. S. Espie, PhD
T. S. Feild, BS, MS, PhD
R. R. Fulthorpe, BSc, MSc, PhD
D. R. Goring, BSc, MSc, PhD
D. S. Guttman, BS, PhD
C. A. Hasenkampf, PhD
P. A. Horgen, BA, MS, PhD
L. M. Kohn, BS, PhD
P. M. Kotanen, PhD
H. J. Kronzucker, BSc, PhD
J. H. McAndrews, BSc, MSc, PhD
P. D. MCCOurt, PhD, NSERC Performance Plants Chair in Plant Genetics, Canada Research Chair
J. M. Moncalvo, BSc MSc, PhD
N. Provart, BSc, MSc, PhD
C. D. Riggs, PhD
R. F. Sage, BA, MS, PhD
(Chair)
T. L. Sage, BA, MS, PhD
B. J. Saville, MSc, PhD
J. Scott, Ph.D.
S. C. Thomas, BA, PhD
J. D. Thomson, AB, MS, PhD
V. R. Timmer, BScF, MScF, PhD
G. C. Vanlerberghe, Bsc, MSc, PhD
K. Yoshioka, BA, MS, PhD

Members Emeriti

P. W. Ball, BSc, PhD
J. Dainty, BA, MA, DSc, University Professor Emeritus
N. G. Dengler, BA, MS, PhD
R. E. Dengler, BS, PhD
M. C. Heath, BSc, PhD
J. A. Hellebust, BA, MA, PhD
V. J. Higgins, BSc, MSc, PhD
M. Hubbes, DiplngAgr, DrAgr
R. L. Jefferies, Bsc, PhD
D. W. Malloch, BA, MA, PhD
C. Nalewajko, BSc, PhD, DSc
N. A. Straus, BSc, MSc, PhD
J. Svoboda, BSc, PhD
J. P. Williams, BSc, PhD, DIC

Associate Members

K. F. Abraham, BA, MS, PhD
A. A. Agrawal, BA, MA, PhD
R. K. Cameron, BA, PhD
M. Campbell, Bsc, MSc, PhD
J. C. Krug, BSc, MA, PhD
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S. Lesage
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The Department's graduate program in Plant and Microbial Biology offers the following subjects:
Cellular, Molecular, and Developmental Biology
Ecology and Evolutionary Biology

Candidates are accepted under the general regulations.

Degree of Master of Science

Admission Requirements

A high academic standard is required for admission. Satisfactory performance will normally be demonstrated by an average grade in the final year, equivalent to a University of Toronto B+ and an average grade in the previous year of B. In exceptional circumstances, where there is strong supporting supplementary evidence, students with a mid-B average in the final year may be admitted to the program.

Program Requirements

M.Sc. candidates must complete one half-course during the program, preferably in the first

year. The half-course may be either a BOT 1700 seminar series or a regular graduate course. Attendance at 80% of the departmental seminar series is a requirement. Original research and defence of a thesis are also required.

Degree of Doctor of Philosophy

Admission Requirements
Candidates for the Ph.D. degree are generally acceptable by two routes, either by transferring from the M.Sc. program or following completion of an M.Sc. degree. A student completing a B.Sc. with outstanding academic achievement (A- average in final year) and proven research accomplishments may be admitted directly to the Ph.D. program.

Program Requirements
For Ph.D. students there is a minimum formal course requirement of three half-courses for students who have completed a M.Sc., with the first half-course taken in the first year. It is strongly suggested that at least one of these be selected from the BOT 1700 series seminar courses. The supervisory committee will evaluate the course work of Ph.D. applicants to determine if additional courses are required. Students that transfer from a M.Sc. to a Ph.D. program may count any course work completed prior to the transfer toward their Ph.D. requirements. However, transfer students are still expected to take one BOT 1700 series course during their Ph.D. program. It is expected that many Ph.D. students will continue to participate in seminar courses after their minimum requirement is completed. Attendance at 80% of the departmental seminar series is a requirement.

Within 16-20 months of first registration in the program, candidates present a research proposal to the Department. If the research proposal is deemed unsatisfactory by the examination committee, there is a single opportunity to present a revised proposal three months later. Ph.D. candidates make an oral presentation of their thesis for evaluation to the Department as a whole and to a departmental evaluation committee before proceeding to the School of Graduate Studies' Final Oral Examination.

Collaborative Programs

Developmental Biology (Collaborative Program)
The graduate departments of Biochemistry, Botany, Molecular and Medical Genetics, Physiology, and Zoology offer a collaborative Ph.D. program in Developmental Biology.

For full information on this collaborative program, see the Developmental Biology entry in this calendar.

Environmental Studies (Collaborative Program)
The graduate department of Botany, in conjunction with the Institute for Environmental Studies, offers a collaborative master's and doctoral program in environmental studies.

For a full description of this program, see the Environmental Studies entry in this calendar.

Proteomics and Bioinformatics (Collaborative Program)
The graduate units of Biochemistry, Botany, Laboratory Medicine and Pathobiology, Medical Biophysics, Medical Science, Molecular and Medical Genetics, and Zoology offer a collaborative Ph.D. program in Proteomics and Bioinformatics.

For full information on this collaborative program, consult the Proteomics and Bioinformatics entry in this calendar.

Courses of Instruction
All courses are not given every year. Consult the Department each session regarding course offerings.

BOT 1300H	Systematic Botany/J. E. Eckenwalder
BOT 1307H	Families of Vascular Plants/IT: A. Dickinson
BOT 1310H	Comparative Plant Morphology/ T. L. Sage
BOT 1328H	Physiological Ecology//R. F: Sage
BOT 1341H	Plant Anatomy/T L. Sage
BOT 1355Y	Introductory Virology/M. G. AbouHaidar
BOT 1403H	Systematics of the Higher Fungi/ Staff
BOT 1405H	Analysis of Multivariate Data from Biological Experiments/T: A. Dickinson
BOT 1421H	Plant Cell Metabolism/F: DiCosrno
JBF 1436H	Forest Landscape Ecology and Methods/T. J. Carleton
JBZ 1440H	Ecology and Evolution of Plant-Animal Interactions/Staff
BOT 1450H	Plant Proteomics and Metabolomics/D. Christandat
JZB 1459H	Population Genetics/Staff
BOT 1460H	Plant Molecular Genetics/ P. McCourt, T. Berleth
JBZ 1472H	Computational Genomics and Bioinformatics/D. S. Guttrnan, N.J. Provart
JBZ 1473H	Chemical Genomics/S. Cutler

JZB 1520H Evolutionary Ecology/Staff
JZB 1521H Molecular Evolution/A. Baker, D. Irwin
BOT 1628H Molecular and Classical Cytogenetics/C. A. Hasenkampf
BOT 1629H Cellular and Molecular Aspects of Plant Development/C. D. Riggs, T: Berleth

Seminar Courses

BOT 1700H Seminar on Recent Advances in Plant Sciences/Staff
BOT 1701H Seminar on Recent Advances in Plant Sciences/Staff
BOT 1702H Seminar on Recent Advances in Plant Sciences/Staff
BOT 1703H Seminar on Recent Advances in Plant Sciences/Staff
BOT 1704H Seminar on Recent Advances in Plant Sciences/Staff
BOT 1705H Seminar on Recent Advances in Plant Sciences/Staff

Developmen tal Biology (Collaborative Program)

JDB 1025Y Developmental Biology/T Berleth, Staff
JDB 1026Y[o] Student Seminars in Developmental Biology/Staff

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

Cardiovascular Sciences (Collaborative Program)

Program Committee

M. Ojha, BSc, MSc, PhD/Biomedical Engineering
J. Tu, MD, PhD, Canada Research Chair/Health Policy, Management & Evaluation
M. L. Rand, BSc, PhD/Laboratory Medicine & Pathobiology
G. A. Wright, BASc, MASc, PhD/Medical Biophysics
R. D. Weisel, BA, MD, FACS, FRCS(C)/Medical Science, Surgery
C. Wittnich, MSc, DVMjMedical Science, Surgery, Physiology (Director)
V. Rao/Medical Science
R. G. Tsushima, BSc(Hon), PhD/Physiology
S. G. Thomas, BSc, MSc, PhD/Exercise Sciences
D. Brooks, BSc(PT), MSc, PhD/Rehabilitation Science
Student Representatives

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Nature of the Collaborative Program

The graduate units of Biomedical Engineering; Exercise Sciences; Health Policy, Management and Evaluation; Laboratory Medicine and Pathobiology; Medical Biophysics; Medical Science; Pharmacology; Physiology; Public Health Sciences; and Rehabilitation Science, 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. Candidates must first be accepted by one of the participating graduate units and then 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.

Admission Requirements

1 Normally an A- average in previous course work (publications and research work may be considered for mature students).
2 Student has already been accepted into a home graduate unit that participates in the Cardiovascular Sciences Collaborative Program.
3 Acceptance by a supervisor who is a faculty member of the Cardiovascular Sciences Collaborative Program.
4 Research area falls within mandate of the Cardiovascular Sciences Collaborative Program.

Program Requirements

Candidates for the master's and doctoral degrees must meet the requirements of their home graduate unit in terms of course work and thesis work. All students are required to write a thesis under the supervision of a core 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 a half-credit in an approved cardiovascular course listed under approved "Courses of Instruction". For the doctoral degree, students must have course credits in any two of 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 of Instruction

Cardiovascular sciences courses offered by the participating units are listed below. Not all courses are offered each year.

EXS 5508H	Cardiovascular Disease and Exercise/J. M. Goodman
JCV 3060H	Advanced Topics in Cardiovascular Sciences—Molecular Biology and Heart Signal Transduction/ R. Tsushima
JCV 3061H	Advanced Topics in Cardiovascular Sciences—Hormones/ C. Wittnich
JCV 3062H	Advanced Topics in Cardiovascular Sciences—Heart Function/C. Wittnich
JCV 3063H	Advanced Topics in Cardiovascular Sciences—Vascular/ S. Heximer. C. Wittnich

JEB 1365H	Ultrasound: Theory and Applications in Biology and Medicine/ R. S. C. Cobbold
JTC 1331H	Biomaterials Science/M. V. Sefton
LMP 1015H	Vascular Pathobiology/B. L. Langille
LMP 1504H	Cell and Molecular Biology of Cardiovascular Diseases/ A. I. Gotlieb
PSL 1060H	Developmental Cardiovascular Physiology/C. Wittnich
PSL 1462H	Molecular Aspects of Cardiac Function/P. Backx

Chemical Engineering and Applied Chemistry CHE

Graduate Faculty

Full Members

E. J. Acosta, BS, MS, PhD
D. G. Allen, BASc, MASc, PhD, PEng (Coordinator of Graduate Studies)
J. Audet, MASc, PhD
S. T. Balke, BEng, PhD, PEng
D. G. Boocock, BSc, PhD, FClC
Y. L. Cheng, SB, SM, PhD
W. R. Cluett, BSc, PhD, FCIC, PEng
P. A. Cooper, BScF, MSc, BEd, PhD, Value-Added Wood and Composlte Products Chair
D. E. Cormack, BASc, MASc, PhD, FCIC, PEng
T. Coyle, BSc, BA, ScD
J. Davies, BSc, PhD, BDS, DSc
M. **L.** Diamond, MSc, PhD
L. L. Diosady, BASc, MASc, PhD, FCIC, PEng
E. A. Edwards, BEng, MEng, PhD, PEng
G. Evans, BASc, MASc, PhD, PEng
R. Farnood, BASc, MASc, PhD
F. R. Foulkes, BASc, MASc, PhD, PEng
R. R. Fulthorpe, BSc, MSc, PhD
C. Q. Jia, BEng, MEng, PhD, PEng
M. Kawaji, BASc, MSc, PhD, PEng
D. W. Kirk, BASc, MASc, PhD, PEng
M. **T.** Kortschot, BASc, MASc, PhD, PEng
D. Kuhn, BSc, MSc, PhD, PEng
E. Kumacheva, BS, MSc, PhD
C. A. Mims, BS, PhD
R. C. Newman, BA, PhD, DSc
V. Papangelakis, DipEng, MEng, PhD
J. C. Paradi, BASc, MASc, PhD, FCAE, PEng, SSHRC/NSERC Industrial Research Chair
D. W. Reeve, BSc, MASc, PhD, DTechHC, FCIC, FTAPPI, PEng, Frank Dottori Chair in Pulp and Paper Engineering (Chair)
M. Sain, BSc, BASc, MTech, PhD, PEng
J. P. Santerre, BSc, MScEng, PhD
B. A. Saville, BSc, PhD
M. V. Sefton, BASc, ScD, FCIC
M. S. Shoichet, SB, MS, PhD, Canada Research Chair
W. L. Stanford, PhD, BA
H. N. Tran, BSc. PhD, FTappi
K. Woodhouse, BEng, PhD, PEng
N. Yan, BASc, PhD
C. M. Yip, BASc, PhD, PEng, Canada Research Chair
P. Zandstra, BEng, PhD, Canada Research Chair

Members Emeriti

O. Barham, BScEng, DIC, ARSM, PhD
C. E. Chaffey, BSc, PhD, PEng, CChem
M. E. Charles, BSc, MSc, PhD, FCIC, FCAE, PEng, Michael E. Charles Chair in Chemical Engineering
R. E. Jervis
D. Mackay, BSc, PhD, FCIC, PEng
M. J. Phillips, BASc, MA, PhD, FCIC, PEng
O. Trass, BSE, ScD, FCIC, PEng

Associate Members

H. R. Beller, BA, MS, PhD
T. F. Bidleman, BSc, PhD
J. R. Brook, BS, MS, PhD
H. D. Goodfellow, BASc, MASc, PhD, PEng
T. M. Grace, BS, PhD
O. Meresz, MSc, PhD
M. Ojha, BSc, MSc, PhD
S. Sayad, MD, PhD
R. N. S. Sodhi, BSc MSc, PhD
P. R. Tremaine, BSc, PhD, FClC
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Candidates for degrees are accepted under the general regulations. Qualified candidates may engage in research in the following areas:
Advanced Inorganic Molecular Systems
Applied Organic Chemistry
Biomaterials
Biomedical Engineering
Biomolecular Engineering
Bioprocess Engineering
Biotechnology
Ceramics Engineering
Chemical Analysis
Chemical Reactor Design
Combustion Engineering
Composite Materials
Electrochemical Engineering
Energy Engineering
Environmental Engineering
Fluid Mechanics
Food Engineering
Heat, Mass, and Momentum Transport
Hydrometallurgy
Informatics
Nuclear Engineering
Polymer Science and Engineering
Process Control
Process Modelling and Optimal Control

Pulp and Paper
Radiochemistry
Separation Processes
Surface and Interface Engineering
Sustainable Energy
Thermodynamics, Kinetics, and Catalysis
Tissue Engineering

A more complete description of graduate research programs and the enrolment procedure may be found on the Department's Web site, www.chem-eng.utoronto.ca.

Collaborative Programs
The Department of Chemical Engineering and Applied Chemistry participates in the following collaborative programs:
1 Biomedical Engineering
2 Environmental Engineering
3 Integrated Manufacturing
4 Wood Products Engineering
For details, consult the separate entries in this calendar.

Degree of Master of Engineering
The M.Eng. program differs from other graduate programs (M.A.Sc. and Ph.D.) available in the Department in that it is oriented to learning through project work and prescribed courses (normally seven) rather than through research. It is primarily intended for engineers in full-time professional practice who wish to pursue advanced studies at the master's level and on a part-time basis, without committing themselves to full-time residence for experimental research. Students may choose courses of interest to them and may also register in the Environmental Engineering or Integrated Manufacturing collaborative program. Further information on registration may be obtained from the Coordinator of Graduate Studies.

Degree of Master of Applied Science
The M.A.Sc. program requires a minimum full-time residence of one fall and one winter session. In addition to the thesis, each candidate is required to complete at least three graduate courses, one of which must normally be selected from Category A (see below), and at least one of which must be selected in an area outside the student's field of research specialization. Furthermore, normally 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 (see Courses of Instruction). Each candidate should discuss possible research projects with several members of the Department before selecting a thesis topic.

Degree of Doctor of Philosophy
Individuals who have already completed M.A.Sc. requirements and who have demonstrated an exceptional degree of all-round scientific and intellectual ability as evident from theoretical or experimental research, academic standing, initiative, and publication record may apply for continued graduate research leading to the Ph.D. degree. The program is designed to enable such students to complete all degree requirements within four years. Direct admission to the Ph.D. program after the bachelor's degree may be considered in exceptional cases. In addition to the thesis, each Ph.D. candidate is required to complete at least four additional courses if the M.A.Sc. requirements have been completed or at least six courses if admitted directly after the bachelor's degree. Courses must be selected from the calendar and approved by the candidate's supervisor. At least one of these courses must be taken in a minor area of study, and it is recommended that one of these courses should be selected from Category A courses. Normally, Ph.D. 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 (see Courses of Instruction). Within 12 months of starting the Ph.D. program, candidates must pass a qualifying examination. Candidates normally remain in continuous residence (full time, on campus) until the Departmental recommendation for the Final Oral Examination is made, unless special permission to do otherwise has been granted by the Departmental Graduate Studies Committee.

Program Transfer
Very strong M.A.Sc. candidates may apply to transfer to the Ph.D. program after completing one year of the M.A.Sc. program. Such students must first successfully complete a "bypass" examination. Regulations governing such transfers are available in the Chemical Engineering Graduate Studies Office. A student who is permitted such a transfer and who does not hold a master's degree must complete a total of six half-courses in the graduate program. Transfer students who already hold a master's degree must complete a total of four half-courses. Transfer students do not have to take a separate Ph.D. qualifying examination.

Courses of Instruction

A schedule is available from the Coordinator of Graduate Studies at the beginning of each session listing the time and room location for each course.

Students in the M.A.Sc. and Ph.D. programs are required to take course CHE 3000Y *Seminars in Chemical Engineering and Applied Chemistry* in each year 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, which involves research, are required to participate in the non-credit seminar course JDE 1000H *Ethics in Research* during their first or second session of registration.

More details concerning these courses are provided by the Coordinator of Graduate Studies once admission to a graduate program has been confirmed.

Not all courses are given every year. Consult the Department each session as to course offerings.

Category A

CHE 1107H Applied Mathematics
CHE 1140H Topics in Process Identification and Control
CHE 1141H Advanced Chemical Reaction Engineering
CHE 1143H Transport Phenomena
CHE 1144H Separation Processes
CHE 1147H Data Mining in Engineering
CHE 1149H Electrolyte Thermodynamics
JTC 1135H Applied Surface Chemistry
CHE 1310H Chemical Properties of Polymers
JCI 1503H Advanced Topics in Computing and Information Systems
CHE 2504H Industrial Pollution Prevention
MIE 1807H Principles of Measurement

Category B

CHE 1118H Industrial Catalysis
CHE 1213H Corrosion
CHE 1314H The Structure and Properties of Fibrous Materials
JTC 1020H 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 1313H Environmental Microbiology
JCI 1321H Wood Engineering
JNC 2503H Environmental Pathways

500 level courses

CHE 507H Process Modelling and Simulation
CHE 553H Electrochemistry
CHE 564H Pulp and Paper Processes

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.

Chemistry CHM

Graduate Faculty

Full Members

J. P. D. Abbatt, BSc, AM, PhD
(Coordinator of Graduate Studies)
R. A. Batey, BA, PhD
P. W. Brumer, BSc, PhD, FRSC, University Professor, Roel Buck Chair in Chemical Physics
J. B. Chin, BSc, PhD
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D. J. Donaldson, BSc, PhD
D. H. Farrar, BSc, MSC, PhD
U. Fekl, MSc,Phd
S. J. Fraser, BA, PhD
M. Georges, BSc, Phd
M. C. Goh, BSc, PhD
R. E. Kapral, BSc PhD, FRSC
L. Kay, BSc, PhD, Canada Research Chair
R. H. Kluger, AB, AM, PhD, FRSC
U. J. Krull, BSc, MSc, PhD, AstraZeneca Professor of Biotechnology
E. Kumacheva, BS, MSc, PhD
M. Lautens, BSc, PhD, AstraZeneca Professor of Organic Synthesis
D. Lidar, BSc, MSc, PhD
S. M. Mabury, BS, PhD
(Chair)
P. Macdonald, BSc, MSc, PhD
I. Manners, BSc, PhD
R. A. McClelland, BSc, PhD, FRSC
D. McMillen, BSc,MSc,Phd
M. Menzinger, Dipl-Ing, MSc. PhD
D. R. Miller, BSc, PhD, FRSC, Canada Research Chair
C. A. Mims, BS, PhD
H. Morris, BSc, PhD
G. A. Ozin, BSc, DPhil, FRSC, University Professor, Canada Research Chair
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B. Sherwood Lollar, BA, PhD
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M. Simpson, Phd 1999, BS 1993
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G. Walker
F. Wania, Dipl-Geook, PhD
S. G. Whittington, BA, PhD
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G. A. Woolley, BSc, PhD
K. Yudin, BS, PhD
D. Zamble, BSc PhD

Members Emeriti

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Associate Members

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Modern facilities are available for research leading to the M.Sc. and Ph.D. 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.

An average of at least B+ is required for admission to the graduate programs. An exceptional student with an appropriate B.Sc. degree may be admitted directly to the Ph.D. program. Alternatively, transfer to the Ph.D. program may be considered after a one-year M.Sc. residency period.

Degree of Master of Science
A candidate's program will normally include the submission of a thesis, the successful completion of one graduate full-course equivalent, and participation in a seminar program.

Degree of Doctor of Philosophy
The main requirement for this degree is the execution of an original investigation that is presented in a thesis. A candidate for this degree selects one of the following as a major field: Analytical Chemistry, Environmental Chemistry, Inorganic Chemistry, Organic Chemistry, Experimental Physical Chemistry, Theoretical Physical Chemistry, or 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 two full-course equivalents from approved graduate courses offered in the School of Graduate Studies. Up to one full-course equivalent taken for credit in the master's program may be used to partially fulfil the Ph.D. requirements. Each program requires successful completion of an oral examination in the area of the major field, as well as participation in a seminar program.

Specific requirements for some of the major fields are as follows:

1 Analytical Chemistry
One half-course in analytical chemistry in each of the areas of spectroscopy, separation science, and electrochemistry, plus one other half-course to support the research program. Candidates must also pass seven cumulative exams and participate in the Analytical Chemistry seminar program.

2 Environmental Chemistry
At least four half-courses to include CHM 1401H, at least one other course in environmental chemistry (IES 1410H, CHM 1415H, CHM 1425H, CHM 1550H), and at least one CHM course to be chosen in consultation with the supervisor/supervisory committee and confirmed by the field representative. The fourth course may be an approved course offered in a cognate department. Presentation of two seminars (normally in second and fourth years of study) and participation in the Environmental Chemistry seminar and colloquia program. A written research proposal, defended orally, on a topic other than the primary research topic delivered prior to the end of the second year of graduate study. Successful completion of an oral examination in the area of Environmental Chemistry, normally completed following course work and before the end of the second year of graduate study.

3 Inorganic Chemistry
Four half-courses including one core half-course plus the presentation of one seminar each year (to a total of four) in the Inorganic Chemistry seminar program including one on an original research proposal.

4 Experimental Physical Chemistry
Four half-courses consisting of a combination of core and other courses. The number of core courses is determined by the research director and the student, while observing the principle that breadth of background preparation should be the major objective in course selection. Attendance and participation in the Physical Chemistry seminar program are mandatory.

5 Theoretical Physical Chemistry
Six half-course equivalents, including two core half-courses. Specifics are to be determined by the research director and the student. Attendance and participation in the Physical Chemistry seminar program are mandatory.

6 Organic Chemistry
At least four half-courses to include at least two Organic Chemistry graduate courses selected from CHM 1040H to CHM 1068H (inclusive). Students may take graduate courses from other chemistry fields or cognate departments. All students are expected to be at the level of the fourth year undergraduate courses offered in physical organic, synthetic organic, and biological chemistry, and if necessary the cross-listed Arts and Science courses may be taken. Courses will be selected in consultation with the supervisor and confirmed by the Graduate Studies Committee field representative. Candidates must also pass seven cumulative exams and present two seminars as a component of their participation in the Organic Chemistry seminar program (normally in the second and fourth years of study). Upon completion of course work and cumulative exams, candidates will take an oral exam in the area of Organic and Biological Chemistry.

7 Polymer and Materials Chemistry
Four half-courses, to include at least two of the three core courses. A list of other courses considered appropriate to the Polymer and Materials Chemistry research area is available from the department. Presentation of at least two seminars (the first will be an independent research proposal, the second a presentation on research) and participation in the Polymer and Materials Chemistry seminar program. Successful performance in an oral examination in the area of Polymer and Materials Chemistry following the completion of course work.

8 Interdisciplinary Ph. D. Program

Four half-courses, including one core half-course from the above subdisciplines, and participation in one of the subdiscipline seminar programs. Acceptance into this program requires a research topic of a truly interdisciplinary nature; a written request must be submitted to the graduate coordinator.

Depending upon the area of research, candidates may also be required to show an adequate ability to translate scientific text in one or two of the following languages: French, German, and Russian.

A candidate whose major subject is in another department may consult the Department of Chemistry regarding the selection of a minor in Chemistry.

Collaborative Programs

Biomolecular Structure

The Department of Chemistry participates in the Collaborative Program in Biomolecular Structure. For details, consult the separate entry in this calendar.

Environmental Studies

The Department of Chemistry, in conjunction with the Institute for Environmental Studies, offers a collaborative master's program in environmental studies. Program requirements include the submission of a research thesis in environmental chemistry, one graduate half-course in chemistry and two half-courses offered by the Institute for Environmental Studies, and participation in the seminar program, including presentation of a seminar, at the Institute for Environmental Studies. For a further description of this program, see the Environmental Studies entry in this calendar.

Course Schedules

A schedule listing the times, room locations, and course descriptions is available from the Coordinator of Graduate Studies at the beginning of each session.

Research Courses

All M.Sc. and Ph.D. degree candidates engaged in research must register in the appropriate 2000 sequential series of research courses in one of the major fields. Candidates register in these courses each year, in sequence of the last digit.

Courses of Instruction

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

Organic Chemistry

CHM 1003H Physical Organic Chemistry II (AS 443H)*
CHM 1004H Synthetic Organic Chemistry (AS 440H)*
CHM 1005H Applications of Spectroscopy in Organic Structure Determination (AS 441H)*
CHM 1006H Bioorganic Chemistry (AS 447H)*
CHM 1008H Biological Chemistry (AS479H)*
CHM 1040H Modern Organic Synthesis
CHM 1045H Modern Physical Organic Chemistry
CHM 1054H Topics in Bioorganic Chemistry
CHM 1055H Special Topics in Organic Chemistry
CHM 1057H Selected Topics in Organic Chemistry
CHM 1060H Advanced Topics in Synthetic Organic Chemistry
CHM 1061H Advanced Physical 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

Analytical Chemistry

CHM 1102H Developing Techniques in Analytical Chemistry§ (AS 414H)*
CHM 1103H Advanced Topics in Analytical Chemistry§ (CHM 414H)#
CHM 1104H Separation Sciences (AS 416H)*
CHM 1150H Advances in Electroanalytical Chemistry and Electrochemical Sensors
CHM 1152H Chemical Sensors
CHM 1157H Applications of Chemometrics
CHM 1190Y Analytical Chemistry Seminar (CrediVNo Credit)
CHM 2014H Research in Analytical Chemistry

Inorganic Chemistry

CHM 1204H Organometallic Chemistry (AS 432H)*
CHM 1205H Inorganic Reaction Mechanisms
CHM 1206H Solid State Chemistry: Structure-Property Relations (AS 434H)*
CHM 1209H Structural Methods in Inorganic Chemistry§ (AS 436H)*

§Core course
*Listing in the calendar of the Faculty of Arts and Science
^Scarborough College listing
#Erindale College listing

CHM 1253H Organometallic Chemistry of the Transition Elements
CHM 1258H Reactions of Coordinated Ligands
CHM 1261H Topics in Inorganic Chemistry I
CHM 1262H Topics in Inorganic Chemistry II
CHM 1263H Bioinorganic Chemistry (AS 437H)*
CHM 1268H X-Ray Crystallography
CHM 1269H New Directions in Solid-state Chemistry: Materials Self-Assembly
CHM 1270H Frontiers in Inorganic Chemistry
CHM 1290Y Inorganic Chemistry Seminar (Credit/No Credit)
CHM 2034H Research in Inorganic Chemistry

Polymer and Materials Chemistry

CHM 1301H Organic and Inorganic Polymer Synthesis5 (formerly CHM 1475H Chemistry of Macromolecules II)
CHM 1302H Physical Chemistry of Polymers§ (formerly CHM 1474H Chemistry of Macromolecules I)
CHM 1310H Polymer Chemistry (AS 426)*
CHM 1390Y Polymer and Materials Chemistry Seminar (Credit/No Credit)
CHM 2304H Research in Polymer and Materials Chemistry
JCH 1317H Data Interpretation in Quantitative Polymer Analysis
JMY 1303H Solids as Advanced Polymer Materials

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 1465H Quantum Theory of Scattering
CHM 1469H The Molecular Dynamics of Chemical Reactions, Part I
CHM 1472H Selected Topics in Physical Chemistry of Surfaces
CHM 1476H Modern Topics in Statistical Mechanics
CHM 1477H The Molecular Dynamics of Chemical Reactions II
CHM 1478H Quantum Mechanics for Physical Chemists§
CHM 1479H Thermodynamics§
CHM 1480H Basic Statistical Mechanics§ (AS 427H)*
CHM 1481H Reaction Kinetics and Dynamics§ (AS 421H)*
CHM 1482H Laser Spectroscopy and Photophysics
CHM 1483H Group Theory and Quantum Mechanics
CHM 1484H Semiclassical Mechanics
CHM 1485H Molecular Dynamics and Chemical Dynamics in Liquids
CHM 1486H Modern Molecular Spectroscopy
CHM 1487H Modern Topics in Colloid Chemistry
CHM 1488H Modern Research Developments in Physical Chemistry
CHM 1489H Topics in Nonlinear Chemical Dynamics
CHM 1490Y Physical Chemistry Seminar (Credit/No Credit)
CHM 2024H Research in Physical Chemistry

Environmental Chemistry

CHM 1401H Transport and Fate of Chemical Species in the Environments
CHM 1415H Atmospheric Chemistry
CHM 1420H Environmental Chemistry of Soil
CHM 1425H Modelling the Fate of Organic Chemicals in The Environment
CHM 1550H Topics in Environmental Chemistry
CHM 1590Y Environmental Chemistry Seminar (Credit/No Credit)
CHM 2534H Research in Environmental Chemistry
IES 1410H Analytical Environmental Chemistry

All graduate courses for degree credit must be approved by the Department. Subject to departmental permission, degree candidates 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.

§Core course
*Listing in the calendar of the Faculty of Arts and Science

Civil Engineering CIV

Graduate Faculty

Full Members

B. Abdulhai, BSc, MSc, PhD
B. J. Adams, BSc, MS, PhD, PEng
R. C. Andrews, BASc, MASc, PhD, PEng
W. F. Bawden, BASc, MSc, PhD, PEng
E. C. Bentz, BASc, PhD
P. C. Birkemoe, BSCE, MSCE, PhD, PEng
J. F. Bonacci, BS, MS, PhD, PEng
P. H. Byer, SB, SM, PhD, PEng
C. Christopoulos, Blng, MASc, PhD
M. P. Collins, BE, PhD, FACI, FCSCE, PEng, University Professor, Bahennanenbaum Professor
A. M. Crawford, BE, MASc, PhD
J. H. Curran, BASc, MEng, PhD, PEng, Robert M. Smith Chair in Geotechnical Mine Design and Analysis
T. E. El-Diraby, BSc MSc, PhD
D. P. Gauvreau, BSc, MSE, Dr sc techn
M. W. Grabinsky, BASc, MASc, PhD, PEng
F. L. Hall, BA, MSc, PhD
R. D. Hooton, BASc, MASc, PhD, FACI, FACerts, PEng
B. W. Karney, BASc, MEng, PhD, PEng
(Associate Chair, Graduate Studies)
C. A. Kennedy, BEng, DiplEcon Postgrad, MASc, PhD, PEng
K. A. Klein, BASc, MASc, PhD
H. L. MacLean, BASc, MEA, MASc, PhD, PEng
B. Y. McCabe, BASc, PhD, PEng
E. J. Miller, BASc, MASc, PhD, Bahennanenbaum Professor
B. Mohanty, BSc, MTech, MA, PhD , PEng, NSERC-Industrial Research Chair in Rock Dynamics and Fragmentation
J. A. Packer, BE, MSc, PhD, FICE, FASCE, PEng
K. D. Pressnail, BASc, MASc, LLB, PhD
A. S. Shalaby, BSc, MASc, PhD, PEng
S. A. Sheikh, BSc, MASc, PhD, PEng
B. E. Sleep, BASc, MASc, PhD
W. H. Vanderburg, BASc, MASc, PhD, PEng
F. J. Vecchio, BASc, MEng, PhD, PEng
R. P. Young, BSc, MSc, Postgrad Cert Educ, PhD, CEng, Keck Chair in Engineering Seismology and Rock Mechanics (Chair)

Members Emeriti

J. Ganczarczyk, MSc, DSc, FRSH, PEng
E. Hauer, Bsc, MSc, PhD, PEng
J. G. Henry, BSc, MSE, PhD, PEng
V. F. Hurdle, BS, MEng, PhD, PEng
T. C. Kenney, BEng, DIC, MSc, PhD, PEng
R. M. Soberman, BSc, SM, PhD, PEng
G. N. Steuart, BSc, MSc, PhD, PEng
J. Timusk, BASc, MASc, PhD, PEng
G. T. Will, BASc, MASc, PEng

Associate Members

D. M. Bagley, BS, MS, PhD, PEng
B. Bakht, BSc, MSc, DSc, PEng
R. H. Hofmann, BEng, MASc, PhD, PEng
I. A. Kayssi, BEng, MS, PhD
S. N. Liss, BSc, MSc, PhD
L. A. McComb, BASc, MSc, PhD, PEng

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Fax: (416) 978-6813
E-mail: grad–programs @civ.utoronto.ca
For graduate admissions:
grad–admissions@civ.utoronto.ca
Web: www.civ.utoronto.ca

Qualified candidates are accepted for advanced studies in structural engineering, construction management and engineering, environmental engineering, geomechanics and materials engineering, transportation engineering, and planning.
Note: *Students registered in a graduate degree program involving research are required to participate in the non-credit seminar course JDE 1000* Ethics in Research during *their first or second session of registration.*

Environmental Engineering (Collaborative Program)
The graduate departments of Chemical Engineering and Applied Chemistry, Civil Engineering, Mechanical and Industrial Engineering, and Materials Science and Engineering participate in the collaborative graduate program in Environmental Engineering at the University of Toronto. Details of this program are available in the Environmental Engineering entry in this calendar.

For additional information, contact the Department of Civil Engineering for a copy of the Graduate Brochure.

Degrees of Master of Engineering and Master of Applied Science
Candidates for these degrees are accepted under the general regulations. It should be noted that for those candidates who do not

possess an undergraduate degree in civil engineering, more than the usual time and number of courses may be required. 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. An M.Eng. program will normally consist of ten courses for the course work only program. Up to two courses may be replaced by a research/design project. An M.A.Sc. program will normally consist of a minimum of five courses and a thesis. Some sections may require 6 half-courses and a thesis. Please consult the supervisor and/or refer to the departmental graduate student handbook for further details.

There is no formal residence requirement for the M.Eng. degree for students in the Department of Civil Engineering, and, therefore, the program may be completed through part-time studies.

Degree of Doctor of Philosophy

Candidates for this degree are accepted under the general regulations and under the regulations for the degree of Doctor of Philosophy, except for the following Departmental regulations which supercede the general regulations.

1 Admission directly from a bachelor's degree is not normally permitted.

2 Three letters of reference are normally required from applicants.

3 If a candidate transfers from a master's degree program to a Ph.D. program, courses taken during the master's program may be applied to the Ph.D. program.

4 The Ph.D. academic program is defined in terms of a major and 2 minor fields of study, normally consisting of 6 to 11 half-courses in total, depending upon the candidate's background preparation. Candidates transferring from a master's program or with a master's degree from another discipline typically take 8 to 11 half-courses. Candidates with a master's degree in Civil Engineering typically take 6 to 8 half-courses. It is normally expected that at least one of the minor fields will be taken outside of the Department. This academic program must be approved by the Department's Examination and Degree Committee during the candidate's first session.

5 Supervisors are required to establish a supervisory committee for their Ph.D. students by the end of the second year of the student's program. This committee must include the supervisor and at least two graduate faculty members. Membership approval is not requited.

The committee must meet with the student at least once a year to assess the student's progress in the program; an annual progress report must be submitted for the department file. Committee membership and meeting dates are entered on ROSI by this department. Failure to comply with this procedure would adversely affect a student's future registration.

6 The academic program must be defended by the candidate in a comprehensive examination after completing most of the course work and preferably within one year after first enrolment in the Ph.D. program. This examination consists of a four to five-day, take-home written examination, followed approximately a week later by an oral examination. The examination is administered by a Comprehensive Examination Committee created and supervised by the Department's Examination and Degree Committee.

7 Candidates normally must spend at least two academic years of their program on campus on a full-time basis.

Candidates seeking admission to the Ph.D. program must be able to satisfy the Department that they have the ability to undertake advanced research.

Courses of Instruction

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/Staff
CIV 1307H	Evaluating the Sustainability of Engineering Activities/H. L. MacLean
CIV 1310H	Infrastructure Economics/C. A. Kennedy
CIV 1337H	Simulation in Civil Engineering/ Staff
CIV 1504H	Applied Probability and Statistics for Civil Engineering/Staff
CIV 1539H	Evaluation of Civil Engineering Systems/P.H. Byer
CIV 1600H	Readings in Technology and Modern Society I/W H. Vanderburg
CIV 1601H	Readings in Technology and Modern Society II/W H. Vanderburg

Building Engineering

CIV 514H	Concrete Technology/R. D. Hoofon
CIV 575H	Building Science/K. D. *Pressnail*
CIV 1250H	Instrumentation Techniques in Concrete Technology/R. D. Hooton

CIV 1252H Repair and Maintenance of Concrete Structures/R. D. Hooton
CIV 1277H Construction Estimating and Finance/B. Y McCabe
CIV 1278H Pre-Project Planning and Constructability Analysis/T. E. El-Diraby
CIV 1279H Construction Contract Documents/K. D. Pressnail
CIV 1280H Building Envelope Design/K. D. Pressnail
CIV 1281H Management of Building Projects/ Course Coordinator: B. Y McCabe
CIV 1282H Case Studies in Building Science/ Staff
CIV 1283H Information Technology in Construction Management/ T. E. El-Diraby
CIV 1299H Special Studies in Civil Engineering/Staff

Environmental Engineering

CIV 540H Treatment Processes/R. Hofrnann
CIV 549H Groundwater Flow and Contamination/B. E. Sleep
CIV 550H Water Resources Engineering/ B. J. Adam
CIV 1303H Water Resources Systems Modelling/B. W Karney
CIV 1305H Water Resources Systems Analysis/B. J. Adams
CIV 1308H Physical/Chemical Treatment Processes/R. H. Hofmann
CIV 1309H Biological Treatment Processes/ Staff
CIV 1319H Chemistry and Analysis of Water and Wastes/B. E. Sleep
CIV 1335H Advanced Hydrogeology/B. E. Sleep
CIV 1399H Special Studies in Civil Engineering/Staff
JCC 1313H Environmental Microbiology/Staff

Geotechnical Engineering

CIV 523H Geotechnical Design/ M. W. E Grabinsky
CIV 529H Rock Engineering/J. H. Curran
CIV 1404H Numerical Methods in Geomechanics/Staff
CIV 1419H Rock Dynamics/Staff
CIV 1420H Soil Properties and Behaviour/ K. A. Klein
CIV 1446H Slopes and Earthworks/ M. W. E Grabinsky
CIV 1499H Special Studies in Civil Engineering/Staff

Structural Engineering

CIV 510H Solid Mechanics II/F/J. Vecchio
CIV 513H Collaborative Engineering and Architectural Design Studio/ D. P Gauveau
CIV 518H Behaviour and Design of Steel Structures/J/A. Packer
CIV 519H Structural Analysis II/E. C. Bentz
CIV 1161H Prestressed Concrete Structures/ M. P Collins
CIV 1163H Mechanics of Reinforced Concrete/F: J. Vecchio
CIV 1164H Bridge Engineering/D, P Gauvreau
CiV 1166H Plastic Analysis and Design of Steel Structures/Staff
CIV 1167H Structural Dynamics/ C. Christopoulos
CIV 11 69H Advanced Topics in Building Design/S. A. Sheikh
CIV 1171H Structural Dynamics and Earthquake Engineering/ C. Christopoulos
CIV 11 74H Finite Element Methods in Structural Mechanics/€. C. Bentz
CIV 1175H Design of Tubular Steel Structures/J. A. Packer
CIV 1199H Special Studies in Civil Engineering/Staff
CIV 1361H Reinforced and Prestressed Concrete Structures/M. P. Collins

Transportation Engineering and Planning

CIV 531H Transport Ill—Planning/E.J. Miller
CIV 533H Transport Operations/Staff
CIV 1505H Transportation Research Seminar/Staff
CIV 1507H Public Transport/A. S. Shalaby
CIV 1508H Airport Planning and Engineering/ L. A. McCoomb
CIV 1535H Transportation and Development/ E. J. Miller
CIV 1538H Transportation Demand Analysis/ E. J. Miller
CIV 1540H Urban Transportation Networks/ B. Abdulhai
CIV 1599H Special Studies in Civil Engineering/Staff

Classics CLA

Graduate Faculty

Full Members

T. D. Barnes, BA, MA, DPhil, FRSC
R. Barney, BA, PhD, Canada Research Chair
C. F. Bruun, BA, MA, PhD
(Coordinator of Graduate Studies)
J. S. Burgess, BA, MA, PhD
M. Dewar, BA, MA, DPhil
B. c. Inwood, BA, MA, PhD, FRSC, Canada Research Chair (Chair)
A. R. Jones, BA, PhD, FRSC
A. Keith, BA PhD
J. C. Magee, BA, MA, PhD
S. Manning, BA, MA, PhD
H. J. Mason, BA, AM, PhD
C. McDonough, BA, MA, PhD
C. I. Rubincam, BA, PhD
M. B. Wallace, BA, MA, PhD

Members Emeriti

R. L. Beck, BA, MA, PhD
J. Grant, BA, MA, PhD
M. E. Irwin, BA, MA, PhD
J. M. Rist, BA, MA, FRSC
E. I. Robbins, BA, MA, PhD
J. Traill, BA, MA, PhD

Associate Members

A. Bendlin, PhD
J. C. Edmondson, PhD
B. MacLachlan, PhD
M. Revermann, PhD

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Web: www.chass.utoronto.ca/classics/

The Department of Classics provides advanced training 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. Archaeological and art-historical studies are pursued through the Ancient Studies Collaborative Program (see separate entry in this calendar), which also provides for interdisciplinary work in the art, culture, history, and literatures of ancient Mediterranean and/or Near Eastern cultures.

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.

Candidates are accepted under the general regulations, provided that they also satisfy the Department's requirements. Detailed application procedures and information about graduate funding are available from the Department.

Degree Programs

Master of Arts in Classics

Entry to the M.A. requires the successful completion of an undergraduate program in Classics (B+ average in final year), with the equivalent of at least three and preferably four full years of training in each of Latin and Greek. Students who are otherwise qualified but who have less training in the languages should consult with the Department about further preparation.

Candidates may be admitted to a one- or two-year program leading to the M.A., depending on their level of preparation. The M.A. degree program requires 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 M.A. examination cycle; and the submission of an acceptable special essay (see Program Descriptions below). Satisfactory completion of the M.A. examination cycle requires at least a B- grade on each component; an acceptable special essay requires a grade of at least B.

Master of Arts in Greek or Latin

Candidates for the M.A. in Greek or Latin must satisfy all the normal requirements for the M.A. in Classics, but are only required to pass one of the M.A. sight translation examinations in the minor language. Candidates should be aware that the M.A. in Greek or Latin alone is not normally adequate preparation for doctoral study in Classics.

Doctor of Philosophy in Classics

1 Standard admission to the Ph.D. program requires the successful completion of either a strong undergraduate program in Classics (with at least an A- average in the final year) or a strong M.A. 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.

2 Candidates may also be admitted to the Ph.D. with advanced standing if they have completed the revised M.A. 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 Ph.D.

Candidates admitted under standard conditions as described in 1 above must satisfactorily complete required courses (GRK 1000H, GRK 2000H, GRK 2100H and LAT 1000H, LAT 2000H, LAT 2100H), pass all components of the M.A. examination cycle with grades of at least B+, and earn a grade of at least A- on the special essay (see Program Descriptions below). For doctoral students this examination cycle and the special essay are referred to as the qualifying examinations and qualifying essay. Doctoral candidates who complete the qualifying examinations and essay at a lower standard which nevertheless satisfies the M.A. requirement will be granted the M.A. but may be required to withdraw from the doctoral program or to retake examinations.

Candidates admitted with advanced standing as described in 2 above are exempt from the qualifying examinations and qualifying essay.

Program Descriptions

Two-year Master of Arts

In the first year of study, candidates take 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. GRK 1000H and LAT 1000H are graded credit/no credit. Students who do not complete these courses with appropriate standing may be required to withdraw from the M.A. program or to retake the courses.

In the second year of study, candidates are required to take the following four half-courses: Classics of Greek Literature (GRK 2000H, GRK 2100H) and Classics of Latin Literature (LAT 2000H, LAT 2100H). These survey courses (graded credit/no credit) cover the most important authors of Greek and Roman antiquity.

Each student is assigned to a faculty advisor for CLA 2000H, the M.A. 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

Candidates are required to take the following four half-courses: Classics of Greek Literature (GRK 2000H, GRK 2100H) and Classics of Latin Literature (LAT 2000H, LAT 2100H). These survey courses (graded credit/no credit) cover the most important authors of Greek and Roman antiquity. Students may also be required to take GRK 1000H and/or LAT 1000H to help them prepare for the M.A. examinations.

Each student is assigned to a faculty advisor for CLA 2000H, the M.A. 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.

The M.A. in Classics is granted on completion of the M.A. examinations with at least B- in each component. These are:

- Sight translation examination in Greek (not required for the M.A. in Latin).
- Sight translation examination in Latin (not required for the M.A. 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.

Doctor of Philosophy

In the first year, candidates take the required courses to prepare for the qualifying examinations and write their qualifying essay under the guidance of a faculty advisor. The program of study is normally identical to that of the one-year M.A. outlined above. To continue in the program, candidates must earn at least a B+ on each component of the qualifying examinations and at least an A- on their qualifying essay. Students admitted with advanced standing as described in 2 above are exempt from these requirements.

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. Students will be notified of such additional requirements at the time of their offers of admission or early in the first session.

Doctoral candidates must 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,

candidates are expected to have passed one modern language examination. By the end of year two, candidates should have completed the other modern language examination.

In the second year (first year for candidates admitted with advanced standing) candidates take CLA 3000H Research Techniques in Classics and at least three of the required total of five research seminars. The supervisory committee is normally established in year two. By the end of the third year (second year for candidates admitted with advanced standing) candidates should have completed their minor field examination and the rest of their required research seminars. The major field examination should be completed by the middle of fourth year (third year for candidates admitted with advanced standing). The dissertation should be completed by the end of the fifth year (fourth year for candidates admitted with advanced standing).

Minor field (CLA 3500H°)
The minor field is established at the end of second year (first year for candidates 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 candidates 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.

Collaborative Programs
The Department participates in the following collaborative programs:
1 Ancient and Medieval Philosophy
2 Ancient Greek and Roman History
3 Ancient Studies
4 Editing Medieval Texts
For more details, consult the separate entries in this calendar.

Courses of Instruction

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°	M.A. Special Essay
CLA 3000H	Research Techniques in Classics
CLA 3500H°	Minor Field
CLA 4000Y°	Major Field

Research Seminars
The following courses are open to students in other departments with the permission of the instructor and the Department. See the departmental brochure or Web site for language requirements. Not all courses are offered every year. See the departmental brochure or Web site for offerings in the current year.

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 5005H	Herodotus
CLA 5006H	Thucydides
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 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

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

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

Community Development (Collaborative Program)

Program Committee

J. E. Quarter, BA, MA, PhD/Adult Education & Counselling Psychology
M. S. Schneider, BA, MA, PhD/Adult Education & Counselling Psychology
D. Schugurensky, BEd, MEd, PhD/Adult Education & Counselling Psychology (Associate Director)
A. Daniere, MPP, PhD, MCIP/Geography, Planning
B. D. Poland, BA, MA, PhD/Public Health Sciences
U. George, BEd, BSc, MA, MA, PhD, Royal Bank Chair in Applied Social Work Research/Social Work
J. D. Hulchanski, BA, MSc(PI), PhD, MCIP, Chow Yei Ching Social Work Chair in Housing/Urban & Community Studies, Social Work (Director)

Address:
J. David Hulchanski, Director
Collaborative Program in Community Development
Centre for Urban and Community Studies
University of Toronto
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Canada
M5S 2G8

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E-mail: urban.centre@utoronto.ca
Web: www.urbancenter.utoronto.cal communitydevelopment.html

Nature of Collaborative Program

The Collaborative Program provides students with a multidisciplinary graduate education in community development. Community development is 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 control its future.

Students must apply to and register in a home participating unit (i.e., one of the graduate departments or faculties listed below), and follow a course of study acceptable to both that unit and the Collaborative Program in Community Development. Applications will be considered for the following degree programs:

1 Adult Education and Community Development (M.A. and M.Ed.) and Counselling Psychology (M.Ed.) in the Department of Adult Education and Counselling Psychology at OISE/UT
2 Program in Planning (M.Sc.(PI.)), in the Department of Geography
3 Public Health Sciences (M.H.Sc.) in the Faculty of Medicine
4 Faculty of Social Work (M.S.W.)

Application Procedures

Collaborative programs are administered under the auspices of the School of Graduate Studies. Applicants may apply concurrently to their participating graduate unit and to the Collaborative Program in Community Development.

1 Applicants must apply to a participating graduate unit and comply with the admission procedures of that unit.
2 Applicants must forward the following to the Program Committee of the Collaborative Program in Community Development:
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; and
d a letter explaining how their program of study and specific research interests relate to community development studies at the graduate level.

Note: Students may use copies of official documents (a and b above) for their application to the Collaborative Program in Community Development. These may be obtained from their home participating graduate unit.

Program Requirements

Students must register in the masters 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 fulfil the requirements of the Collaborative Program in Community Development, they must complete the following (note that normally, the required courses listed below are taken as options within regular departmental or faculty degree requirements, not as additional courses):

1 the core course UCS 1000H Community Development: Theory and Practice;
2 two additional half-courses in the subject area of the Collaborative Program, to be approved by the Collaborative Program director; at least one of the two additional half-courses must be external to the home graduate unit;
3 participation in a non-credit coordinating seminar on community development; and
4 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. The supervisor of the thesis or the reader

of a major research paper must be a member of the faculty associated with the Collaborative Program.

Courses of Instruction

Core Course

UCS 1000H Community Development: Theory and Practice

Students must take two half-courses 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.

Adult Education and Counselling Psychology

AEC 1102H Community Development: Innovative Models
AEC 1104H Community Education and Organizing
AEC 1289H Community Mental Health
AEC 3119H Global Perspectives on Feminist Education, Community Development and Community Transformation
AEC 3131H Citizenship Learning and Participatory Democracy
AEC 3211H Counselling and Researching in Context: Critical Perspectives on Counselling and Health Promotion Research

Program in Planning (Department of Geography)

JPG 1418H Rural Planning
JPG 1421H Health in Urban Environments
JPG 1507H Housing and Housing Policy
JPG 1508H Planning with the Urban Poor in Developing Countries
PLA 1503H Planning and Social Policy

Public Health Sciences

CHL 5112H Community Development in Health
CHL 5801H Health Promotion

Social Work

SWK 4210H Promoting Empowerment
SWK 4422H Social Housing and Homelessness
SWK 4568H Social Work with Immigrants and Refugees
SWK 4651H Community Social Work Practice

Comparative, International and Development Education (Collaborative Program)

Program Committee

K. Mirchandani, BA, MA, PhD/Adult Education & Counselling Psychology
S. Mojab, MEd, PhD/Adult Education & Counselling Psychology
K. Mundy, BA, MA, PhD, Canada Research Chair/Adult Education & Counselling Psychology (Co-Director)
D. Schugurensky, BEd, MEd, PhD/Adutt Education & Counselling Psychology
K. Bickmore, BA, MA, PhD/Curriculurn, Teaching & Learning
J. P. Farrell, BSc, PhD/Curriculurn, Teaching & Learning (Co-Director)
G. Feuerverger, BA, MA, PhD/Curriculurn, Teaching & Learning
G. Dei, BA, MA, PhD/Sociology & Equity Studies in Education
R. Folson, PhD/Sociology & Equity Studies in Education
S. Anderson, PhD/Theory & Policy Studies in Education
R. E. Hayhoe, BA, MA, PhD/Theory & Policy Studies in Education
R. Joshee, BA, MA, PhD/Theory & Policy Studies in Education

Address:
Comparative, International and Development Education Centre (CIDEC)
Ontario Institute for Studies in Education
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Telephone: (416) 923-6641
Fax: (416) 926-4725
E-mail: cide@oise.utoronto.ca
Web: cide.oise.utoronto.ca

Nature of Program

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. CIDE students and faculty bring extensive international experience. Faculty 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 that is unparalleled in other comparative education programs. More traditional sociological, historical and philosophical approaches are taught alongside vibrant interpretations of feminist, critical, post-structuralist and cultural theories.

Additionally, CIDE students have access to courses and professors with related geographic and thematic interests at one of the world's preeminent research universities. Students can take courses in such fields as political science, development studies, international relations, 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, where a vibrant community of scholars and students interested in international issues congregates.

The CIDE program will interest Canadian students who wish to work and live in other cultures or want to better understand the educational and social systems of the many learners in Canada's multicultural society. It will also interest international students who wish to relate their studies at OISE/UT directly to their own societies and learning systems.

The CIDE program is available to applicants enrolling in the M.Ed., M.A., Ed.D., and Ph.D. degree programs in the following four OISE/UT participating departments:

1 Adult Education and Counselling Psychology
- Adult Education Program

2 Curriculum, Teaching and Learning
- Curriculum Program
- Second Language Education Program

3 Sociology and Equity Studies in Education
- Sociology in Education Program

4 Theory and Policy Studies in Education
- Educational Administration Program
- Higher Education Program
- History and Philosophy of Education Program

Successful students receive a notation on their transcript identifying their specialization in Comparative, International and Development Education.

Admission Requirements

Candidates 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, clearly noting the CIDE Collaborative Program code ("2") on the Application for Admission form.

In addition to meeting the minimum OISE/UT admission requirements and department requirements, applicants to the 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.

Collaborative Program requirements include course selections from the Comparative, International and Development Education core and specialization courses; regular participation in, and contribution to the CIDEC Seminar Series; and, depending upon the degree program and department, preparation of a thesis, research paper, or comprehensive paper related to Comparative, International and Development Education as certified by a participating faculty member from the home department. Information on core and specialized CIDE courses (including course syllabi) is available on the CIDE Web site http://cide.oise.utoronto.ca.

Master's Program

1 Required introduction: CIE 1001H Introduction to Comparative, International and Development Education.
2 One core CIDE master's level course.
3 Two other core CIDE or specialization master's-level courses.
4 Regular participation in and attendance at the CIDE Seminar Series.
5 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.

Doctoral Program

1 Required introduction: CIE 1001H Introduction to Comparative, International and Development Education, if not already taken, or equivalent if transferring from another university.
2 One core CIDE doctoral level course.
3 Two other core CIDE or specialization doctoral-level courses.
4 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).
5 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.

Faculty Advisors

Students are advised by participating CIDE faculty from their home department. They may also consult the CIDEC office and the CIDE Program Directors.

Courses of Instruction

Comparative Education

CIE 1001H Introduction to Comparative, International and Development Education/J. P. Farrell and *K. Mundy*

Adult Education and Counselling Psychology

AEC 1102H Community Development: Innovation Models/J. *Quarter*
AEC 1114H Comparative and International Perspectives in Adult Education/ D. Schugurensky, S. Mojab, K. Mundy
AEC 1145H Participatory Research in the Community and the Workplace/ R. Ng, Staff
AEC 1146H Women, Globalization, and Citizenship/S. Mojab
AEC 1180H Aboriginal World Views: Implications for Education/L. Fitznor
AEC 1181H Embodied Learning and Qi Gong/ R. Ng, Staff
AEC 3104H Political Economy of Adult Education in Global Perspectives/S. Mojab, D. Schugurensky, Staff
AEC 3119H Global Perspectives on Feminist Education, Community Development, and Community Transformation/A. R. Miles, Staff
AEC 3131H Special Topics in Adult Education (Doctoral) (as designated by CIDE)/Staff
AEC 3132H Special Topics in Women in Development and Community Transformation/Dame N. Barrow (Distinguished Visitor)

AEC 3138H Social Theories and Adult Education/D, Schugurensky, Staff
AEC 3140H Post-Colonial Relations and Transformative Education/R. Ng
AEC 3179H Work, Technology and the Knowledge Economy/ K. Mirchandani

Curriculum, Teaching and Learning

CTL 1312H Democratic Citizenship Education/K. Bickmore
CJL 1318H Teaching Conflict and Conflict Resolution/K. Bickmore
CTL 3008H Critical Pedagogy, Language, and Cultural Diversity/J. P. Cummins
CTL 3015H Seminar in Second-Language Literacy Education/B. Burnaby, A. Cumrning, J. Cummins
CTL 3018H Language Planning and Policy/ N. Labrie
CTL 4013H Comparative and Cross-Cultural Perspectives/J, Farrell, Staff
CTL 6002H Education and Social Development/J.P Farrell or staff
CTL 6003H Comparative Education: The Development of Third World Education Systems/D. N. Wilson or Staff
CTL6801H Methodologies for Comparing Educational Systems/Staff

Sociology and Equity Studies in Education

SES 1912H Foudaulti and Research in Education and Culture: Discourse, Power and the Subject/K. Dehli
SES 1922H Sociology of Race and Ethnicity/ G. J. S. Dei
SES 1924H Modernization, Development, and Education in African Contexts/ G. J. S. Dei
SES 1927H Global Economic Restructuring—International Migration—Immigration Policies (Canada, U.S., Germany)/R Baaba Folson
SES 1956H Social Relations of Cultural Production in Education/ R. Walcott
SES 1925H Indigenous Knowledge and Decolonization: Pedagogical Implications/G. J. S. Dei
SES 2999H Special Topics in Sociological Research in Education(as designated by CIDE)/Staff
SES 3910H Advanced Seminar on Race and Anti-Racism Research Methodology in Education/G. J. S. Dei
SES 3914H Anti-Colonial Thought and Pedagogical Challenges/G. J. *S.* Dei
SES 3921H Language and Social Difference in Education: Comparative Perspectives/M. Heller
SES 3933H Theorizing Transnationality: Feminist Perspectives/D. A. Trotz
SES 3942H Innovations in Education: A Comparative Analysis/ M.P. Farrell
SES 3943H Sociology of State Formation and Genealogies of Government/ K. Dehli
SES 3952H Sexism, Racism, Colonialism: Pedagogical Implications/D. A. Trotz, Staff

Theory and Policy Studies in Education

TPS 1016H School Program Development and Implementation/S. Anderson
TPS 1017H Educational Finance and Economics/ D. Lang
TPS 1020H Teachers and Educational Change/B. Mascall, N. Bascia
TPS 1047H Managing Changes in Classroom Practice/S. Anderson, Staff
TPS 1400H The Origins of Modern Schooling I: Problems in Education Before the Industrial Revolution/ D. Levine
TPS 1415H The History of the Teaching Profession/Staff
TPS 1420H European Popular Culture and the Social History of Education: I/D. Levine
TPS 1421H The History of Women and Education/D. Levine, C. Morgan
TPS 1425H Class Formation and Its Relation to the Schools/C. Morgan
TPS 1430H Gendered Colonialisms, Imperialisms and Nationalisms in History/C. L. Morgan
TPS 1448H Popular Culture and the Social History of Education II/ C. Morgan
TPS 1803Y Recurring Issues in Postsecondary Education/Staff
TPS 1806H Systems of Higher Education/ G. A. Jones
TPS 1825H Comparative Education: Theory and Methodology/R. E. S. Hayhoe

TPS 1826H Comparative Higher Education/ R. E. S. Hayhoe
TPS 1832H East Asian Higher Education/ R. E. S. Hayhoe
TPS 3017H Problems in the Finance and Economics of Education/Staff
TPS 3020H Educational Change in the Post-Modern Age/N. Bascia
TPS 3045H Educational Policy and Program Evaluation/N. Bascia
TPS 3423H Education and Family Life in the Modern World IVD. Levine
TPS 3447H Theories of Modernity and Education I/Staff
TPS 3806H Case Studies in Comparative Higher Education/Staff
TPS 3810H International Academic Relations/ R. E. S. Hayhoe

Geography

JPG 1509H Gender, Place and the Politics of Development/K. N. Rankin

Political Science

JPE 2408Y Political Economy of International Development/R. Sandbrook, G. Indart

Comparative Literature COL

Graduate Faculty

Full Members

V. Ambros, BA, MA, PhD/Slavic
R. Baraheni, BA, MA, PhD/Comparative Literature
A. Budde, PhD/Comparative Literature
E. Cazdyn, BA, MA, PhD/East Asian Studies
J. E. Chamberlin, BA, PhD, FRSC, University Professor/English
R. Comay, BA, MA, PhD/Philosophy
J. A. Fleming, BA, MA, PhD/French (Coordinator of Graduate Studies)
B. J. Havercroft, BA, MA, PhD/French
L. A. M. Hutcheon, BA, MA, PhD, University Professor, FRSC/English
A. A. lannucci, BA, AM, PhD/Comparative Literature
P. Kleber, BA, MA, PhD/Comparative Literature
L. Komaromi, BA, MA, PhD/Comparative Literature
T. Lahusen, BA, MA, PhD/History
R. Le Huenen, L es L, DenPh, ChPA, FRSC/French (Director)
J. LeBlanc, MA, PhD/French
J. Ross, BA, MA, PhD/Medieval Studies
S. J. Rupp, BA, MA, MPhil, PhD/Spanish
J. Zilcosky, PhD/German

Members Emeriti

N. Z. Davis, BA, MA, PhD, FAmAcAs. CFBrAc/History
L. Dolezel, BA, MA, PhD, FRSC/Slavic
B. T. Fitch, BA, D de L'U, FRSC, University Professor Emeritus/French
E. K. Kushner, MA, PhD, FRSC/Cornparative Literature
O. J. Miller, MA, D de L'U/French
P. W. Nesselroth, MA, PhD, ChPA/French
B. C. A. Stock, AB, PhD/English
M. J. Valdes, BA, MA, PhD, FRSC, Miembro Correspondiente de la Academia Mexicana/Comparative Literature

Associate Members

S. C. Akbari, BA, MA, MPhil, PhD/English
C. J. Barnes, BA, MA, PhD/Slavic
G. Bisztray, PhD/Slavic
J. Blackmore, BA, MA, PhD/Spanish
R. M. Brown, BA, MA, PhDEnglish
J. F. Burke, BA, MA, PhD/Spanish
R. Capozzi, BA, MA, PhD/Italian
F. I. Case, MA, D de L'U/French
C. Clark, BMus, MA, PhD/Music
A. Cozea, BA, MA, PhD/French
P. Fitting, MA, PhD/French
L. W. Forguson, BA, MA, PhD/Philosophy
M. Gieri, DLett, PhD/Italian
W. Goetschel, PhD/Geman
S. E. Guenther, MA, PhD/Near&, Middle Eastern Civilizations
M. Hewitt, BA, MA, MA, PhD/Religion
B. C. Inwood, BA, MA, PhD, FRSC, Canada Research Chair/Classics
H. J. Jackson, BA, MA, PhD/English
A. Keith, BA, PhD/Classics
J. R. Kippen, BA, PhD/Music
V. Krysinski, BA, MA, PhD/Comparative Literature
K. A. Lantz, BA, MA, PhD/Slavic
E. M. Legge, BA, MA, PhD/History of Art
G. M. Leonard, BA, MA, PhD/English
F. J. Marker, AB, DFA/English
H. J. Mason, BA, AM, PhD/Classics
J. L. Matus, BA, MA, PhD/English
A. Motsch, MA, PhD/French
J. Noyes, BA, MA, PhD/Geman
J. M. Paterson, MA, PhD, FRSC/French
J. W. O. Patrick, BA, MA, PhD/English
A. Percival, BA, MA, PhD/Spanish
P. Perron, BA, D de L'U, ChPA, OPA, FRSC/French
D. Pietropaolo, BSc, MA, PhD/Italian
O. L. Pugliese, BA, MA, PhD/Italian
E. I. Robbins, BA, MA, PhD/Classics
H. W. Rupprecht, PhD/Comparative Literature
A. Sakaki, MA, PhD/East Asian Studies
R. M. Sarabia, BA, MA, PhD/Spanish
W. D. Shaw, BA, AM, PhD, FRSC/English
L. Somigli, DLett, PhD/Italian
R. Sternberg, BA, MA, PhD/Spanish
T. Trojanowska, BA, MA, PhD/Slavic
D. W. Vincent, BA, MA, PhD/German
M. Xie, PhD/English

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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 M.A. and Ph.D. degree programs to candidates 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 candidate's undergraduate and graduate records and upon the evidence of the references and statement. The deadline for receiving applications to both the M.A. and Ph.D 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.

Degree of Master of Arts

Admission Requirements

Candidates for this degree are accepted under the general regulations of the School of Graduate Studies provided that they also satisfy the Centre for Comparative Literature's requirements stated below. In all cases, their programs must be approved by the Centre.

Admission to the M.A. program requires a 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. Applicants to the M.A. program must demonstrate 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. Candidates 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 candidates must register as full-time students.

Program Requirements

1 Students admitted to the one-year program must complete at least 4 full-course equivalents including at least 2.5 full-course equivalents in COL courses, one of which must be COL 1000H.

2 Students admitted to the two-year program must complete at least 6 full-course equivalents including at least 3.5 full-course equivalents in COL courses, one of which must be COL 1000H.

3 Students may pursue independent research for credit equivalent to one half-course at the M.A. level, under the direction of an advisor approved by the Centre.

4 A plan of study is defined by each M.A. 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.

5 Candidates must obtain an average of at least B+ in their course work to be recommended for the master's degree.

6 M.A. candidates 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 M.A. is received.

Degree of Doctor of Philosophy

Admission Requirements

Candidates for this degree are accepted under the general regulations of the School of Graduate Studies provided that they also satisfy the Centre for Comparative Literature's requirements stated below. In all cases, their programs must be approved by the Centre.

Admission to the Ph.D. program requires a 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. Applicants must demonstrate an ability to do advanced research in two languages and literatures other than English.

Program Requirements

Ideally, the Ph.D. program in Comparative Literature should be completed in four years. Candidates are required to take from five to eight full-course equivalents, depending on their individual academic backgrounds.

1 A student with an M.A. in Comparative Literature, or its equivalent, will be required to take at

least five full-course equivalents, three of which must be COL courses. A student who has an M.A in a humanities discipline involving literary studies, especially specific language and literature programs, may be required to take up to eight full-course equivalents, at least four of which must be COL courses. The actual number of courses required for the Ph.D. will be established at the time of admission through consultation with the Director/Coordinator of Graduate Studies.

2 Time-Line: Ph.D. students, in close consultation with the Graduate Coordinator and faculty members, are responsible for defining the scope and approach of their plan of study. Students submit a preliminary statement of purpose at the time of application to the Centre. 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 Ph.D. program. Students constitute a field examination/supervisory committee and submit a dissertation proposal no later than the end of the second year of Ph.D. study. The field examination is taken no later than the end of the first session of the third year.

3 Language and Literature Requirements: Candidates for admission to the Ph.D. program, in addition to their work for the M.A., 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 fulfil their other literature requirements through graduate-level work in continental French and British literature.

4 Students may pursue independent research for credit equivalent to one half-course at the Ph.D. level, under the direction of an advisor approved by the Centre.

5 All Ph.D. students are required to enrol in COL 4000Y, a credit/non-credit course, in addition to the agreed upon number of full-course equivalents 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.

6 When the field examination has been completed successfully, the candidate will prepare and defend a dissertation which must be an original and significant contribution to the existing body of knowledge. The Centre for Comparative Literature is not obligated to provide supervision in areas which fall outside the competency, interests, or availability of its graduate faculty.

7 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.

8 Students' progress will be assessed at least once a year by the Centre's Graduate Academic Committee and/or their respective supervisory committees.

Teaching Assistantships

Although the Centre for Comparative Literature currently has no teaching assistantships (TAships) of its own, it will support qualified students' applications for TAships in the appropriate departments and colleges. Since TAships form part of the funding package, students must apply directly to departments in which they feel qualified to teach, and inform the Centre for Comparative Literature of all teaching assistantships for which they have applied.

Courses of Instruction

Courses listed below include the core program COL seminars as well as cross-listed courses from other departments, centres, and collaborative programs. Students should consult the Comparative Literature handbook as well as the handbooks of other departments for courses that may be taken for credit, as well as for course availability.

Core Program

COL 1006H Faculty Seminar: Theories of Literature and Criticism/Staff

COL 1255H Aspects of Structuralism/ R. Le Huenen

COL 1900H Reading and Research for the M.A./Staff

COL 1910H Reading and Research for the Ph.D./Staff

COL 2000Y Hermeneutics and the History of Texts/M. Valdes

COL 2100H Special Seminar/Staff
COL 3380H Globalization and Culture/ E. Cazdyn
COL 4000Y° Practicum on Research and Bibliography in Comparative Literatu re (Credit/No Credit)/Staff
COL 5010H The Theory of Practice and Literary Adaptation/L. Hutcheon
COL 5016H Dramatic Text and Theatrical Communication: Bertolt Brecht, Robert Wilson and Robert Lepage/P. Kleber
COL 5017H The Francesca Story and Its Reception in the Nineteenth and Twentieth Centuries/A. lannucci
COL 5019H Cervantes and Renaissance Humanism/S. Rupp
COL 5032H Feminist Approaches to Medieval Literature/J. Ross
COL 5033H Visual Portraitures in Contemporary Autobiographical Narratives/J. LeBlanc
COL 5037H Magic Prague: Question of Literary Cityscapes/V. Ambros
COL 5042H Contemporary Chinese Literature/ H. W. Rupprecht
COL 5044H A Journey from Petersbury to Los Angeles/T. Lahusen
COL 5047Y The Two Avant-Gardes/ A. Komaromi
COL 5048Y Uncanny Encounters/J. Zilcosky
COL 5049H Rhetoric and Philosophy/ E. Laclau
JIC 5000H Narrativity and Intertextuality in Italian Fiction/R. Capozzi
JLA 1456H Japan as Seen by?: Reference, Apparatus, Operation/A. Sakaki
JLE 6555Y Discourses and Counter-Discourses/L. A. M. Hutcheon

Cross-listed

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

Drama
DRA 1010Y Theory of Drama/S. B. Johnson
DRA 4030Y Studies in Canadian Theatre and Drama/R. Plant

East Asian Studies
EAS 1424H Multitude, Labour Power, Population/K. Kawashima
EAS 1444H The City, Body, and Text in Modern Japanese Literature/ A. Sakaki

English
ENG 6203H Intercultural Value and the Dialectics of Cultural Exchange/ M. Xie

French Language and Literature
FRE 2036H Configurations du genre sexuel dans la prose contemporaine des femmes/B. Havercroft
FRE 2105H Ecritures du moi: de la representation textuelle a la representation visuelle du sujet ecrivant/J. LeBlanc

German Languages and Literatures
GER 1470H Goethe in Contex/WW. Goetschel
GER 1501H Romanticism/J. Noyes

History
HIS 1282H Totalitarian Culture/T. Lahusen

Italian Studies
ITA 1728H New Trends in the Italian Novel From 1957 to the Present/ R. Capozzi
ITA 1760H From Futurism to Novecentismo: The Rise and Fall of the Italian Avant-Garde/L. Somigli

Medieval Studies
MST 2021H Insular Literacy 400-12001 A. Orchard
MST 2040Y Medieval Rhetoric and Poetics/ J. Ross

Philosophy
PHL 2084H Seminar in Nineteenth-Century Continental Philosophy/ R. Comay

Slavic Languages and Literatures
Please consult the Department's handbook for course listings.

Spanish
Please consult the Department's handbook for course listings.

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

Computer Science CSC

Graduate Faculty

Full Members

T. Abdelrahman, BSc, MSc, PhD, PEng
R. F. Almgren, BS, MS, PhD
F. Bacchus, MSc, PhD
R. M. Baecker, BS, MSc, PhD
R. Balakrishnan, BSc, MSc, PhD
J. C. Beck, BSc, MSc, PhD
F. Blake, BASc, MASc, PhD, PEng
A. Bonner, BSc, MSc, PhD
A. B. Borodin, BA, PhD, FRSC
C. Boutilier, MSC, PhD
(Chair)
M. Chechik, MSc, PhD
M. H. Chignell, BSc, MSc, PhD
C. C. Christara, BSc, MSc, PhD
S. A. Cook, BS, AM, PhD, FRSC, FRS, University Professor
D. G. Corneil, BSc, MA, PhD
E. de Lara, BSc, MSc, PhD
A. Demke Brown, BSc, MSc, PhD
S. J. Dickinson, MSc, PhD
S. M. Easterbrook, BSc, PhD
W. H. Enright, BSc MSc, PhD
T. F. Fairgrieve, MSc, PhD
F. E. Fich, BM, MMath, PhD
E. L. Fiume, BM, MSc, PhD
D. J. Fleet, PhD
M. S. FOX, BSc, PhD, FAAAI, FCIAR, NSERC Industrial Research Chair in Enterprise Integration
G. S. Graham, BSc, MA, MSc, PhD
V. Hadzilacos, BSE, PhD
E. C. Hehner, BSc, MSc, PhD
A. Hertzmann, MS, PhD
G. E. Hinton, BA, PhD, FRSC, FRS
G. Hirst, BA, BSc, MSc, PhD
K. R. Jackson, BSc MSc, PhD
A. D. Jepson, BSc, PhD
N. Koudas, PhD
K. Kutulakos, BSc, MSc, PhD
H. J. Levesque, BSc MSc, PhD
L. Libkin, BSc, MSc, Phd
P. J. Marbach, BSc, MSc, Phd
R. A. Mathon, MSc, PhD
S. A. Mcllraith, MMath, PhD
E. Mendelsohn, BSc, MSc, PhD
A. O. Mendelzon, BS, MA, MSc, PhD
R. J. Miller, BS, PhD
S. Molloy, MSc, PhD
J. Mylopoulos, BSc, MSc, PhD
R. M. Neal, BSc, MSc, PhD
G. B. Penn, Bsc, MSc, PhD
T. Pitassi, MSc, PhD
C. W. Rackoff, SB, SM, PhD
S. T. Roweis, BSc, MSc. PhD
K. C. Sevcik, BS, MS, PhD
K. Singh, BSc, MSc, PhD
B. C. Smith
S. A. Stevenson, MSc, PhD
M. Stumm, DipMath, PhD
E. V. Swenson, MS, PhD
D. Terzopoulos, MEng, PhD
S. Toueg, BSc, MSc, PhD
J. K. Tsotsos, BASc, MSc, PhD
A. I. Urquhart, MA, PhD
Z. G. Vranesic, BASC, MASC, PhD, PEng
D. B. Wortman, BE, MS, PhD
S. G. Zaky, BSc, MASc, PhD, PEng
R. Zemel, MSC, PhD
(Associate Chair, Graduate Studies)

Members Emeriti

P. I. Boulton, BASc, MASc, PhD, PEng
C. C. Gotlieb, MSc, PhD, D Math, D Eng, FRSC
J. N. P. Hume, B.A., M.A., PhD
A. B. Lehman, BSc, MSc, PhD

Associate Members

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A. Bilas, Dipl CS&E, MA, PhD
J. W. Danahy, BLA, CUrbDes, MScUrb&DesPI
J. Frey, Bsc, MSc, PhD
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Programs of Study and Research Areas

The Department of Computer Science offers a graduate program leading to two degrees: Master of Science (M.Sc.) and Doctor of Philosophy (Ph.D.). The graduate program consists of courses and research. Research is conducted under the supervision of a faculty member.

Graduate faculty in the Computer Science Department 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.

Admission Requirements

Applicants to both the M.Sc. and Ph.D. degree programs must complete an undergraduate degree equivalent to a four-year program at the University of Toronto with a standing equivalent to at least B+. Preference will be 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) or 237 (on the computer-based test) and a TWE essay score of at least 5.

Degree Requirements

Both the M.Sc. and **Ph.D.** degree requirements include some courses and a thesis. The requirements may be reduced for applicants who have already taken some graduate studies in computer science.

Degree of Master of Science

The degree program requires five graduate half-courses, of which at least three must be computer science graduate half-courses, plus a thesis. The courses must satisfy a breadth requirement to ensure a broad and well-balanced knowledge and understanding of computer science. The thesis should demonstrate 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. A high standard of exposition is expected. This degree is offered on either a full-time or part-time basis.

Degree of Doctor of Philosophy

The degree program requires nine graduate half-courses, of which at least six must be computer science graduate half-courses, plus a thesis. The courses must satisfy a breadth requirement to ensure a broad and well-balanced knowledge and deep understanding of computer science. 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.

For further details, consult the *Graduate Student Handbook* prepared by the Department, also available at www.cs.utoronto.ca/DCS/Grad/index.html.

Collaborative Programs

Collaborative programs provide an opportunity for computer science students to pursue a specialized subject of interest as part of their M.Sc. or Ph.D. programs. The SGS Calendar includes a separate entry for each collaborative program. Please see the relevant entry for collaborative program requirements. Computer Science participates in the following collaborative programs:

1 Knowledge Media Design
2 Software Engineering

Note that Computer Science is currently reviewing its participation in the Software Engineering program; therefore, applications are not being accepted for this program now.

Courses of Instruction

Programming Languages and Methodology

CSC 2103H Software Architecture and Design
CSC 2104H Formal Methods of Program Design
CSC 2105H Software Engineering
CSC 2106H Requirements Engineering
CSC 2107H Language Processors
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

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 2209H Computer Networks
CSC 2221H Introduction to Distributed Computing
CSC 2225H Structure and Correctness in Operating Systems

CSC 2227H Topics in the Design and Implementation of Operating Systems
CSC 2228H Topics in Mobile and Pervasive Computing
CSC 2229H Topics in Multiple Access Communications Networks
CSC 2231H 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 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 Computational Vision I
CSC 2506H Probabilistic Learning and Reasoning
CSC 2511H Natural Language Computing
CSC 2512H Constraint Satisfaction Problems
CSC 2515H 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 Computational Vision II
CSC 2528H Topics in 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 Computation in Neural Networks
CSC 2539H Topics in Computer Vision
CSC 2540H Special Topics in Computational Linguistics
CSC 2541H Topics in Machine Learning and Neural Networks
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
CSC 2537H Hypermedia
KMD 1001H Core Seminar in Knowledge Media Design I—Fundamental Concepts

Information Systems

CSC 2507H Conceptual Modelling
CSC 2508H Advanced Database Management Systems
CSC 2509H Data Management Systems
CSC 2510H Topics in Information Systems
CSC 2525H Research Topics in Database Mining
CSC 2526H Economics of Computers
CSC 2527H The Business of Software
CSC 2531H Advanced Topics in Data Management Systems

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

Criminology CRI

Graduate Faculty

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R. Levi, BCL, LLB, LLM, SJD
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J. R. Phillips, MA, LLB, PhD
(Director)
K. W. Roach, BA, LLB, LLM
P. H. Solomon, BA, MA, CertRusslnst, PhD
M. V. Valverde, BA, MA, PhD
N. S. Wortley, BA, MA, PhD
(Coordinator of Graduate Studies)

Members Emeriti

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B. M. Dickens, LLB, LLM, PhD, LLD, Dr. William M. School Professor Emeritus in Health Law and Policy
M. L. Friedland, BCom, LLB, PhD, LLD, OC, QC, FRSC,University Professor Emeritus

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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.

TOEFL

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. On the paper-based test, an overall score of at least 580 and a written score of 5 are required. On the computer-based test, an overall score of at least 237 and a written score of 5 are required. Official copies of these scores must be submitted to the University before a formal offer of admission can be made.

Degree of Master of Arts

Admission Requirements

Candidates for admission must have a four-year University of Toronto bachelor's degree or its equivalent from another university. A four-year bachelor's degree normally consists of 20 full courses. 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 J.D. degree or its equivalent will normally be required to have at least a B standing.

The program is designed for students familiar with the approaches and methodologies associated with the social sciences. It would be advantageous for students 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 M.A. can be completed on a full-time or part-time basis. All candidates will be required to complete the program within the time limits set for the M.A. degree under the general regulations. Students with professional experience who meet the academic admission requirements are encouraged to join the program.

Program Requirements

Candidates for the master's degree can complete the program in 1 of 2 ways: by completing 8 half-courses within 9 months or by completing 6 half-courses and a research paper within 12 months. The degree program divides into two sections: compulsory and optional courses.

The compulsory section consists of the courses on criminological theory and the research methods (CRI 1050H and 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 two half-courses 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.

Degree of Doctor of Philosophy

Admission Requirements

Candidates for admssion normally have an M.A. degree in Criminology, or an equivalent master's degree from a recognized university. Students from M.A. programs other than the University of Toronto's M.A. in Criminology may be required to take additional courses as part of their doctoral program. Applicants will not normally be considered unless they achieved a minimum A- standing in their M.A. degree program.

Program Requirements

Candidates for the Ph.D. degree 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.

Ph.D. candidates with the University of Toronto M.A. in Criminology or its equivalent must fulfil the following requirements:

Comprehensive Examination

Comprehensive examinations evaluate student competence in criminological studies. One major and one minor examination (based on core reading lists set by the faculty and supplemented by examination committees) are to be completed in the second year of study during preset examination periods. These examinations may take the form of take-home papers, oral examinations, critical literature reviews, and course models and practica.

Course Requirements

Ph.D. students must complete a minimum of four half-courses beyond those taken at the M.A. level. Students must complete, at either the M.A. or the Ph.D. level, the required criminological theory course (CRI 1050H) and the research methods course (CRI 2010H). Ph.D. students are also required to participate in the non-credit research seminar.

Course Schedule

Students will normally complete all course requirements for the Ph.D. in the first year of their Ph.D. program. Comprehensives will normally be completed by the end of the first session of the second year. It is expected that the dissertation should be completed and successfully defended by the end of the fourth year.

Language Requirements

Candidates must have an adequate knowledge of a language other than English if an additional language is deemed essential for satisfactory completion of research for the thesis.

Thesis

Ph.D. 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.

Junior Fellowships at the Centre

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 Junior Fellowship program is to involve doctoral students who are studying in areas related to criminology and to enhance the intellectual life of the Centre. The program reflects the Centre's commitment to the multidisciplinary character of criminological research. Therefore, Junior Fellowships are awarded to students whose academic performance, demonstrated interest in criminology, and desire to participate actively in the life of the Centre make it likely that they will contribute to the achievement of the objective of the program.

Junior Fellows may be given office space at the Centre of Criminology if it is available, as well as access to other Centre facilities. The status of Junior Fellow does not include any financial award.

Under special circumstances, students who are enrolled in graduate programs at other universities and who are undertaking research on a criminological topic may apply to be appointed as Visiting Junior Fellows.

Since the Junior Fellowships began in 1976, more than 50 students have been associated with the Centre in this way. Students have come

from a variety of disciplines including Anthropology, Education, History, Law, Philosophy, Political Science, Psychology, Social Work, and Sociology.

Enquiries concerning Junior Fellowships or the Ph.D. program should be directed to the Coordinator of Graduate Studies at the Centre of Criminology.

Combined J.D./M.A. in Criminology

Law students who also want to pursue graduate work in criminology may undertake the combined J.D./M.A. in Criminology degree program.

Admission Requirements

In a combined program, applicants must gain independent admission to both programs. Applicants may be admitted before they enter the J.D. program or while they are in the first year. Applicants wishing to apply to the Combined J.D./M.A. program in Criminology should contact the Admissions Office, Faculty of Law, University of Toronto at (416) 978-3716.

Program Requirements

Students first take the full first-year law program. This is followed by two combined years. Over the course of the two combined years students must:

1 take 45 credits in the Faculty of Law;
2 satisfy the compulsory requirements of the upper years of the J.D. These are a moot, an extended paper, and a perspective course;
3 take six half-courses at the Centre of Criminology; one of these half-courses must be either a theory or a research methods course. Two of these half-courses may be taken in the form of the Centre of Criminology's Research Paper.

Students must take a minimum of two half-courses in Criminology in each of the second and third years of the program and may take a maximum of four half-courses 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.

Collaborative Programs

Criminology participates in two collaborative programs:

1 Addiction Studies
2 Women's Studies

For detailed information, consult the separate entries in this calendar.

Courses of Instruction

All courses are half-courses, with the exception of the Research Paper. 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.

I Required Courses

CRI 1050H Theories of Crime and Social Order/M. Valerde
CRI 2010H Methodological Issues in Criminology/R Gartner

II Optional Courses

CRI 1020H Law and Society: Theoretical Perspectives/R. Levi
CRI 2020H Applied Statistics in Criminology/ Staff
Students may take this course or IRE 1002H Applied Statistics in Industrial Relations, but not both.
CRI 3120H Politics and Crime/P H. Solomon
CRI 3130H Policing/R. V Ericson
CRI 3140H Special Topics in Criminology/ R. I. Gartner
CRI 3150H Crime, Law, and the State in Early Modern England, 1650-1850/J. M. Beattie
CRI 3160H Historical Approaches to Crime and Justice in Canada/J. R. Phillips
CRI 3240H Penology/N. S. Wortley
CRI 3270H The Psychology of Criminal Behaviour: Theory and Practice/ M. C. Seto
CRI 3310H Special Topics in Criminology/ M. Valverde
CRI 3320H The Criminal Process/D. Martin
CRI 3330H Contemporary Issues in Safety and Securityl/taff
CRI 3340H Special Topics in Criminology/ M. Condon
CRI 3350H Directed Research in Criminology/Staff
CRI 3355H Sentencing/D. Cole
CRI 3351H Directed Research in Criminology/Staff
CRI 3360Y° Research Paper/Staff

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

Curriculum, Teaching and Learning CTL

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A. T. Anderson, BA, MEd, PhD
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L. M. Earl, PhD
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G. Feuerverger, BA, MA, PhD
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M. Kooy, BA, MA, PhD
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P. J. Stanovich, BSEd, MA, PhD
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D. Thiessen, BA, MEd, DPhil (Chair)
P. Trifonas, BA, BEd, MA, PhD
D. M. Willows, BA, MA, PhD, CPsych

Members Emeriti

J. L. Aitken, PhD
J. P. Allen, BA, MA, PhD
C. M. Beck, Professor Emeritus
D. G. Bogdan, BA, MA, PhD
D. W. Booth, BA, MEd
S. Churchill, PhD
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D. N. Wilson, Professor Emeritus

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P. Dunlop-Robertson
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Enquiries
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 (OISH/UT)
Registrar's Office
Graduate Studies, Admissions Unit
Fourth Floor, 252 Bloor Street West
Toronto, Ontario
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Such enquiries should be made well in advance of the December 3 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 can be admitted. Program and admission details are printed in the OISE/UT Bulletin, available from the OISE/UT Registrar's Office. Not all courses are offered every year; consult the Department each session for course offerings.

Programs
The following graduate programs are offered by the CTL Department:
1 Curriculum (M.Ed., M.A., Ed.D., Ph.D.)
2 Elementary and Intermediate Education (M.T.)
3 Second Language Education (M.Ed., M.A., Ed.D., Ph.D.)

CTL also participates in the following collaborative graduate degree programs:
1 Comparative, International and Development Education (M.Ed., M.A., Ed.D., Ph.D.)
2 Women's Studies (M.Ed., M.A., Ed.D., Ph.D.)

For further information, consult the separate collaborative program entries in this calendar.

Notes
1 The Master of Arts in Teaching program or M.A.(T.) is discontinued. The Department will maintain the program and its courses until all current students have graduated.
2 The Measurement and Evaluation program will be discontinued and is no longer accepting new applicants.
3 The Teacher Development (TD) program will be discontinued and is no longer accepting new applicants. The CTL Department will continue its strong commitment to teacher development research through studies conducted, coordinated through, or supported by faculty and students associated with the Centre for Teacher Development. Furthermore the Curriculum program will offer a wide range of courses in teacher development, some of which will be transferred from the TD program and some of which are already available in the Curriculum program. Both current and future students will be able to pursue in-depth studies in this area, though no longer in a separate program devoted exclusively to teacher development.

1 CURRICULUM PROGRAM
The Curriculum 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: subject matter, learning, teaching, and the larger social, political, and economic contexts as well as the immediate instructional situation. Curriculum Program course offerings and guided research opportunities reflect the diverse interests of faculty in a range of areas.

Curriculum 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, computer-supported analysis, performed and critical ethnography, and life history.

The interest areas below reflect overlapping and intersecting areas of strength in the whole Curriculum Program, not separate sub-programs. Faculty and students each pursue diverse overlapping combinations of these interests. To show the general dimensions of the Curriculum Program, the interest descriptors

are arranged in categories: broad perspectives on education in various contexts (where and why we teach), curriculum content and pedagogy (what and how we teach), and intersections of curriculum with particular diverse learners (who we teach).

Curriculum Theories, Perspectives and Contexts include broad orientations and diverse settings for research in curriculum, schooling, teaching/learning, educational change:

- Curriculum and Program Development and Implementation
- School and District Policy, Environments, Change and Reform
- Assessment and Evaluation
- Teacher Professional Learning, Teachers as Change Agents
- Teachers' Work, Lives, Narratives, Beliefs and Knowledge
- Holistic Education, Imagination, and Spirituality
- Feminist and/or Queer Theories in Education
- Cultural Studies and Critical Theory in Education
- Dialogic and Social Constructivist Approaches to Curriculum
- Education in Non-school Settings
- Distance Education and Online Learning Environments
- Knowledge Media/Technology, Knowledge Building and Innovation
- Comparative Education and Education in International Settings

Curriculum Subject Matter and Teaching/ Learning Processes include particular subject area content and/or pedagogical approaches:

- Pedagogy, Instructional Design and Student Assessment
- Student and/or Teacher Problem Solving and Critical Thinking
- Arts and Aesthetic Education
- Drama/Theatre Pedagogy
- Health and Physical Education
- Science and/or Technology Education
- Mathematics Education
- English Language, Children's Literature, and Literacy Education
- Democratic Citizenship, Global Perspectives, and Social Sciences Education
- Conflict/Peace Education
- Critical and Social Justice Pedagogies

Diverse Student Populations and Curriculum Equity include challenges and issues in constructing and delivering curriculum for particular diverse students and/or for social change:

- Adaptive Instruction and Inclusive Classrooms
- French-Language Minority Education
- Educating Immigrant and English as a Second Language Students
- Gender and Education
- Sexuality and Anti-Homophobia Education
- Anti-Racist, Multicultural and Anti-Discriminatory Education
- Students' Identity Construction
- Urban Youth
- Early Childhood Education
- Gifted Learners

Degree of Master of Education

The M.Ed. degree program is designed chiefly for the professional improvement of those who are already engaged in a career related to education. 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, 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 should be discussed. In order to identify their research interests in their Statement of Intent, applicants should visit the Curriculum Program Web page (www.oise.utoronto.caldepts/ctl/programs/ curriculum.shtml). 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 her or him to faculty advisors.

The M.Ed. program of study consists of 10 half-courses, at least 5 of which are normally undertaken in the Curriculum Program, and may be taken on a full-time or part-time basis. Additional study may be required either within the degree program or prior to admission, depending on previous experience and academic qualifications. Students are required to successfully complete CTL 1000H *Foundations of Curriculum Studies.* All requirements for the degree must be completed within six years from first enrolment.

Degree of Master of Arts

The M.A. degree program is designed to provide academic study and research training related to curriculum studies. Applicants are accepted under the general regulations. Admis-

sion normally requires a four-year University of Toronto bachelor's degree, or its equivalent, in a relevant discipline or professional program completed with 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. Students who anticipate going on to further study at the Ph.D. level are advised to apply for enrolment in an M.A. rather than an M.Ed. degree program.

In the Statement of Intent, applicants should state the reasons they wish to undertake a research-oriented program of study in curriculum. 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 research interests in their Statement of Intent, applicants should visit the Curriculum Program Web page (www.oise.utoronto.ca/depts/ctl/programs/curriculum.shtml). 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 candidate to faculty advisors.

The M.A. may be taken on a full-time or part-time basis and consists of eight half-courses, at least four of which are normally undertaken in the Curriculum Program, and a thesis. Additional courses may be required of some applicants, depending on previous experience and academic qualifications. Students are required to successfully complete CTL 1000H ***Foundations of Curriculum Studies*** and a course in research methods from an approved course listing. A listing of approved research methods courses is available on the Curriculum Program Web page (www.oise.utoronto.ca/depts/ctl/programs/curriculum.shtml).

Candidates are responsible for meeting deadlines to complete their course requirements, thesis committee formation, and ethical review. All requirements for the degree must be completed within five years from first enrolment.

Degree of Doctor of Education

The Ed.D. degree program is intended for established practitioners in positions which involve responsibility for curriculum design and implementation. A University of Toronto M.Ed. or M.A. in education or its equivalent from a recognized university, in the same area of specialization proposed at the doctoral level, completed with an average grade equivalent to a University of Toronto B+ or better, is required. Further documentation may be required to establish equivalence.

Ordinarily, applicants will have a minimum of three years professional experience in education prior to applying. Admission is contingent upon satisfactory completion of a Qualifying Research Paper (QRP) or a master's thesis. However, an applicant's admission will be confirmed only when the QRP or master's thesis is judged to be of sufficiently high quality to warrant admission.

In the Statement of Intent, applicants should state the reasons they wish to undertake a professional doctoral program in curriculum. The interests or problems to be pursued during the candidate's period of study should be specified. In order to identify research interests in their Statement of Intent, applicants should visit the Curriculum Program Web page (www.oise.utoronto.ca/depts/ctl/programs/curriculum.shtml). Prior research and development experiences should be briefly described. 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 candidate to faculty advisors.

The Ed.D. program of study normally consists of eight half-courses, at least four of which must be undertaken in the Program. Additional courses may be required of some candidates. Students are expected to take CTL 1000H ***Foundations of Curriculum Studies,*** or its equivalent, if they did not complete it at the master's level. Completion of this course or its equivalent prior to entering the program will not result in a reduction in the total number of courses required to complete the program. Students are also required to take one half-course in research methods from an approved course listing. This listing is available on the Curriculum Program Web page (www1.oise.utoronto.ca/depts/ctl/programs/curriculum.shtml).

Students must successfully complete 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 are also required. The Ed.D. program includes a minimum of one year of full-time study but may be initiated on a full-time or part-time basis.

Candidates are responsible for meeting deadlines to complete their course requirements, thesis committee formations, and ethical reviews. All requirements for the degree must be completed within six years from first enrolment.

Degree of Doctor of Philosophy

The Ph.D. is intended primarily as preparation for academic positions in universities; it demands a strong commitment to curriculum research. The Curriculum program offers both a full-time and a flexible-time Ph.D. program option. Applicants must declare their preferred option when applying.

Admission Requirements

Full-time Ph. D. Option

Applicants are accepted under the SGS general regulations. A University of Toronto master's degree in education or its equivalent from a recognized university, in the same area of specialization as proposed at the doctoral level, completed with an average grade equivalent to a University of Toronto B+ or better is required. Further documentation may be required to establish equivalence. Applicants will ordinarily have a minimum of two years professional experience prior to applying. Admission is contingent upon satisfactory completion of a Qualifying Research Paper (QRP) or a master's thesis. However, an applicant's admission will be confirmed only when the QRP or master's thesis is judged to be of sufficiently high quality to warrant admission. All applicants are required to submit 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 Ph. D. Option

Applicants to the flexible-time Ph.D. option are accepted under SGS general regulations and are subject to the same admission requirements as applicants to the full-time Ph.D. option. However, in addition, applicants to the flexible-time Ph.D. must include in their Statement of Intent the outline of a plan that demonstrates the following:

a the applicant is in a career related to the field of study;

b the applicant has three or more years with the same employer;

c a need and desire to continue with current career path;

d the capacity to secure blocks of time to enable concentrated study (e.g., reference to the employer's leave policy, study incentive system, etc.)

Degree Requirements

Full-time Ph.D. students must complete their degree within six years. Flexible-time Ph.D. students must complete their degree within eight years. Degree requirements for both programs are the same. The Ph.D. program of study normally consists of six half-courses, at least four of which are ordinarily undertaken in the Program. Additional courses may be required of some candidates. Students are expected to take CTL1000H Foundations of Curriculum Studies 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 on the Curriculum Program web page (www.oise.utoronto.ca/depts/ctl/programs/curriculum.shtml). Students must successfully complete a comprehensive examination. In addition, a thesis embodying the results of an original investigation, and a final oral examination on the content and implications of the thesis, are also required.

Courses of Instruction

Not all courses are offered every year. Please consult the Department for course offerings.

Master's Level

CTL 1000H Fondements du I'etude des programmes scolaires/Staff

CTL 1000H Foundations of Curriculum Studies/B. Bennett, G. Feuerverger, K. Gallaher, C. T. P. Diamond, L. M, Hannay, W. Seller, D. Trifonas, Staff

CTL 1001H Values and Schooling/ E. Campbell, Staff

CTL 1002H Planification de la programmation pour un enseignement efficacel Staff

CTL 1002H Curriculum Development for Effective Teaching/Staff

CTL 1003H Language Arts in Primary Education/D. M. Willows, L. Cameron

CTL 1005H Language, Literacy, and the School Curriculum/S. Peterson, Staff

CTL 1006H English at the Secondary School Level/lM. Kooy, Staff

CTL 1008H Children's Literature as a Foundation of Literate Behaviour Across the Curriculum/ L. Cameron, Staff

CTL 1009H Theory and Practice in Elementary Literacy Instruction/ S. Peterson

CTL 1010H Children's Literature Within a Multicultural Context/ G. Feuerverger

CTL 1011H Anti-Discriminatory Education in School Settings/T. Goldstein

CTL 1012H Curriculum for Girls and Young Women: Historical and Contemporary Issues/E. Smyth
CTL 1013H Instructional Innovation in the Elementary and Secondary Schools/J. A. Ross, Staff
CTL 1014H Evaluation of Curriculum and Instruction/J. A. Ross, Staff
CTL 1015H Curriculum and Student Evaluation/staff
CTL 1016H Cooperative Learning Research and Practice/J. A. Ross, Staff
CTL 1018H Introduction to Qualitative Inquiry in Curriculum, Teaching, and Learning/D.. Thiessen, Staff
CTL 1019H Authentic Assessment/J. Ross, Staff
CTL 1020H Teaching High Ability Students/ E. Smyth
CTL 1023H Technology and Education: Critical Perspectives on Theory and Practice/P. Trifonas
CTL 1024H Poststructuralism and Education/ P. Trifonas
CTL 1102H Arts and Education: Planning and Implementation of Arts Programs/staff
CTL 1104H Play, Drama, and Arts Education/ Staff
CTL 1105H Research and Inquiry in Arts Education/ M. J. Beattie
CTL 1106H Spirituality in Education/J. Miller
CTL 1110H The Holistic Curriculum/J. Miller
CTL 1115H Teacher Education and the Construction of Professional Knowledge: Holistic Perspectives/M. Beattie
CTL 1116H Holistic Approaches in the Elementary Mathematics Curriculum/R. Cohen
CTL 1117H Liberatory Practices in Drama and Education/K. Gallagher
CTL 1118H The Visual Arts as a Teaching and Learning Strategy/ S. Stiegelbauer
CTL 1200H Science in the School Curriculum/ L. Bencze, Staff
CTL 1202H Mathematics in the School Curriculum: Elementary/ D. McDougall
CTL 1204H Making Mathematics Learning Meaningful: Secondary/ R. Cohen
CTL 1206H Teaching and Learning Science/ D. Hodson
CTL 1207H Teaching and Learning about Science: Issues and Strategies in Science, Technology, Society, and Environment (STSE) Education/€. Pedretti
CTL 1208H Curriculum Issues in Science and Technology: An Historical Perspective/D. Hodson
CTL 1209H Current Issues in Science and Technology Education/ D. Hodson, Staff
CTL 1211H Action Research in Science and Technology Education/D. Hodson, E. Pedretti, L. Bencze, W. Gitari
CTL 1212H Curriculum Making in Science: Some Considerations in the History, Philosophy and Sociology of Science/D. Hodson
CTL 1213H Teacher Research in Mathematics Education/R. Cohen
CTL 1214H Equity Issues in Science Education/D. Hodson
CTL 1215H Teaching and Learning About Science and Technology: Beyond Schools/E. Pedretti
CTL 1304H Cultural Studies and Education/ Staff
CTL 1306H La recherche qualitative en education: bases theoriques et pratiques/D. Gerin-Lajoie
CTL 1306H Qualitative Research Methods in Education: Concepts and Methods/D. Gerin- Lajoie, Staff
CTL 1307H Identite collective et education minoritaire de langue frangaisel D. Gerin-Lajoie
CTL 1307H Identity Construction and Education of Minorities/D. Gerin-Lajoje
CTL 1309H Les stereotypes sexuels dans les programmes scolaires/D. Gerin-Lajoie
CTL 131 2H Democratic Citizenship Education/K. Bickmore
CTL 1313H Gender Equity in the Classroom/ Staff
CTL 131 6H Global Education: Theory and Practice/Staff
CTL 1318H Teaching Conflict and Conflict Resolution/K. Bickmore
CTL 1400H Classroom Adaptations and Instructional Strategies/ A. Jordan
CTL 1402H Adaptive Instruction in Inclusive Classrooms/A. Jordan
CTL 1403H Special Education and Social Representation of Difference/ N. Belanger or Staff

CTL 1600H Implementing Dynamic Web Interaction for Education/Staff
CTL 1602H Introduction to Computers in Education/J. Hewitt, E. Woodruff
CTL 1603H Introduction to Knowledge Building/J. Hewitt
CTL 1604H Video/Multimedia Design/Sfaff
CTL 1605H Internet Resources and Education/Staff
CTL 1606H Computers in the Curriculum/D. McDougall
CTL 1608H Constructive Learning and Design of Online Environment/C. Brett
CTL 1609H Educational Applications of Computer-Mediated Communication/C. Brett
CTL 1611H Computer-Mediated Distance Education/Sfaff
CTL 1612H The Virtual Library (Non-Credit)/ Staff
CTL 1797H Practicum in Curriculum: Master's Level/Staff
CTL 1798H Individual Reading and Research in Curriculum: Master's Level/ Staff
CTL 1799H Special Topics in Curriculum: Master's Levellstaff
CTL 4000H Improving Teaching/ B. S. Kilbourn
CTL 4001H Facilitating Reflective Professional Development/L. M. Hanna
CTL 4002H Constructive Feedback in Teaching/B. S. Kilbourn
CTL 4004H From Student to Teacher: Professional Induction/M. Kooy
CTL 4005H Arts-Based Approaches to Teacher Development/ C.T.P. Diamond
CTL 4007H Language, Culture, and Identity: Using the Literary Text in Teacher Development/ G. Feuerverger
CTL 4008H Knowing and Teaching/ B. S. Kilbourn
CTL 4009H Multicultural Perspectives in Teacher Development: Reflective Practicum/ G. Feuerverger
CTL 4011H Teaching and School Renewal/ C. M. Beck
CTL 4012H Thoughtful Teaching and Practitioner Inquiry/E. Campbell, Staff
CTL 4013H Comparative and Cross-Cultural Perspectives/J. Farrell, Staff
CTL 4798H Individual Reading and Research in Teacher Development: Master's Level/staff
CTL 4799H Special Topics in Teacher Development: Master's Level/ Staff

Doctoral Level

CTL 1800H Research Colloquium in Curriculum and Instruction/Sfaff
CTL 1801H Action Research and Professional Practice/Staff
CTL 1802H The Conceptualization of Curriculum Problems/Sfaff
CTL 1805H Advanced Seminar in Language and Learning: Theory and Practiceis. Peterson, L. Cameron
CTL 1808H Curriculum Innovation in Teacher Education/D. Thiessen, Staff
CTL 1823H Arts and Education: Play, Drama, and Thought/K. Gallagher
CTL 1825H The Teacher as a Contemplative Practitioner/J. Miller
CTL 1840H Gender Issues in Mathematics, Science, and Technology/ M. Nieswandt
CTL 1841H Research Seminar in Science Education/D. Hodson, E. Pedretti, L. Bencze, M. Nieswandt
CTL 1861H Critical Ethnography/T. Goldstein
CTL 1880H Analysis of Instruction/A. Jordan, Staff
CTL 1921H Knowledge Building Environments/M. Scardamalia
CTL 1922H Seminar in Interactive Video/ Graphics/staff
CTL 1923H Technology Supported in Situ Learning/E. Woodruff, Staff
CTL 1924H Research Issues in Educational Computer-Mediated Communication/Staff
CTL 1997H Practicum in Curriculum: Doctoral Levellstaff
CTL 1998H Individual Reading and Research in Curriculum: Doctoral Level/ Staff
CTL 1999H Special Topics in Curriculum: Doctoral Level/Staff
CTL 4801H Narrative and Story in Research and Professional Practice/ C. Conle
CTL 4802H Qualitative Research in Teaching/ B. S. Kilbourn
CTL 4804H Alternative Theoretical Perspectives in the Study of Curriculum Practice and Teacher Development/C. T. P. Diamond, M. Kooy, K. Cooper

CTL 4806H Professional Ethics of Teaching and Schooling/E. Campbell
CTL 4997H Practicum in Teacher Development: Doctoral Level/Staff
CTL 4999H Individual Reading and Research in Teacher Development: Doctoral Level/Staff

Master's and Doctoral Levels

CTL2006H Fundamentals of Program Planning and Evaluation/T. Lam or Staff
CTL2007H Research Methods In Education/ T. Lam or Staff
CTL2009H Instrument Development in Education/R. E. Traub or Staff
CTL2010H Research Issues in Alternative Assessments/T. Lam and Staff
CTL2802H Performance Assessment/T. Lam
CTL2803H Models and Issues in Program Evaluation/T. Lam and Staff
CTL2810H Seminar in Evaluation Problems/ Staff
Prerequisite: CTL2803H or equivalent

2 MASTER OF TEACHING IN ELEMENTARY AND INTERMEDIATE EDUCATION PROGRAM

The Master of Teaching (M.T.) degree program in Elementary and Intermediate Education is a two-year full-time program of study leading to a Master of Teaching degree. Upon successful completion of this program, students will be recommended to the Ontario College of Teachers for an Ontario Teacher certificate of Qualification which qualifies them to teach in either the primary and junior divisions or the junior and intermediate divisions of Ontario schools.

The Elementary and Intermediate Education program offers students a unique opportunity for teacher qualification with advanced theoretical knowledge and research skills. The program provides students with a strong theoretical grounding in curriculum theory and pedagogical practice, learning theory and developmental psychology, with a focus on literacy and mathematics. The high level of academic rigour in conjunction with increased practicum and internship opportunities serve to enhance the theoretical and practical experiences of candidates preparing to teach.

Program objectives are achieved through a combination of course work, teaching and research seminars, internships and practica, along with independent and collaborative research experiences.

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 standing equivalent to a University of Toronto 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 the limited number of students in this program, not all eligible applicants can be admitted.

Because applicants are applying to a teacher education program, the following items must be submitted with the application:

a 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
b a photocopy of a certificate of change of name where applicable
c satisfactory evidence of freedom from tuberculosis (required by the Ontario College of Teachers)

Notes

a Satisfactory evidence of freedom from active tuberculosis is required at the beginning of each academic year.
b 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 M.T. degree comprises the equivalent of 16 half-courses (14 core and 2 electives), including practica, and is undertaken on a full-time basis. Normally, advanced standing is not granted in this program. In addition to the course work (including practica), all candidates must successfully complete a comprehensive examination at the end of the program in order to graduate and receive the M.T. degree and a recommendation to the Ontario College of Teachers for an Ontario Teachers' Certificate of Qualification. Registration in the second year is contingent upon successful completion of all first-year work.

Courses of Instruction

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.

3 SECOND LANGUAGE EDUCATION PROGRAM

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.

Degree of Master of Education

Candidates 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 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.

Students may complete the M.Ed. program in one of two ways:

a 8 half-courses plus a research project or
b 10 half-courses

One of the courses must be either CTL 3000H or CTL 3002Y. Students must take a minimum of four half-courses within the SLE program; other courses may be taken from other programs in the Department of Curriculum, Teaching, and Learning; other Departments at OISE/UT; in the Departments of Linguistics or Anthropology; or in language departments at the University of Toronto. The M.Ed. program may be taken on a full-time or part-time basis. Additional study may be required either within the degree program or prior to admission. All requirements for the degree must be completed within six calendar years from first enrolment.

Degree of Master of Arts

Candidates are accepted under the general regulations. Admission requires a four-year University of Toronto bachelor's degree, or its equivalent, in a relevant discipline or professional program, completed with 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. Enrolment in the M.A. (rather than M.Ed.) program is advisable for applicants expecting to pursue a doctorate in the future.

The M.A. program may be undertaken on a full-time or part-time basis and consists of eight half-courses and a thesis. Part-time students are expected to be available to take CTL 3001H during day-time hours (usually Friday afternoons). Courses must include CTL 3001H plus a course in research methods relevant to the topic of the thesis. Any of the following courses can fulfil this requirement: CTL 1018H, CTL 1306H, CTL 2007H, CTL 3019H, CTL 3800H, CTL 3803H, CTL 3807H, CTL 4005H, CTL 4802H, AEC 1400H, HDP 1287H, HDP1288H or SES 1905H. Students wishing to propose an alternative course to fulfil 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. Candidates 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.

Degree of Doctor of Education

The Ed.D. is intended for individuals who have already established a professional career in Second Language Education and wish to make

aspects of their professional practice the subject of their graduate studies and thesis research. Candidates are accepted under the general regulations. A University of Toronto master's degree, or its equivalent from a recognized university completed with an average grade equivalent to a University of Toronto B+ or better is required. Admission is contingent upon satisfactory completion of a Qualifying Research Paper (QRP) or a master's thesis. A candidate's admission will be confirmed only when the QRP or master's thesis is judged to be of sufficiently high quality to warrant admission. Ordinarily, applicants will have a minimum of three years relevant professional experience prior to applying.

The Ed.D. ordinarily involves eight half-courses (depending on previous experience and academic qualifications), comprehensive exams, a thesis embodying the results of an original investigation, and a final oral examination on the content and implications of the thesis. Students must take a minimum of four half-courses within the SLE Program. Students are required to take 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 fulfil this requirement: CTL 1018H, CTL 1306H, CTL 2007H, CTL 3019H, CTL 3800H, CTL 3802H, CTL 3803H, CTL 3807H, CTL 4005H, CTL 4802H, CTL 4805H, AEC 1400H, HDP 1287H, HDP 1288H, or SES 1905H. Students wishing to propose an alternative course to fulfil 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.

The Ed.D. requires two consecutive sessions (i.e., one academic year) of full-time study at some point during the program. Candidates are responsible for meeting deadlines to complete their course requirements, thesis committee formation, and ethical review. All requirements for the degree must be completed within six calendar years of first enrolment.

Degree of Doctor of Philosophy

Individuals pursuing the Ph.D. typically wish to be university professors in this field. The Second Language Education program offers both full-time and flexible-time Ph.D. options. Applicants must declare their preferred option when applying.

Admission Requirements

Full-time Ph. D. Option

Applicants are accepted under the SGS general regulations. A University of Toronto master's degree, or its equivalent from a recognized university, completed with an average grade equivalent to a University of Toronto B+ or better is required. Admission is contingent upon satisfactory completion of a master's thesis, or the equivalent in the form of a Qualifying Research Paper (QRP). 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 Ph. D. Option

Applicants to the flexible-time Ph.D. option are accepted under the SGS general regulations and are subject to the same admission requirements as applicants to the full-time Ph.D. option. However, in addition, applicants to the flexible Ph.D. must include in their Statement of Intent the outline of a plan that demonstrates the following:

a the applicant is in a career related to the field of study;

b the applicant has three or more years with the same employer;

c a need and desire to continue with current career path;

d the capacity to secure blocks of time to enable concentrated study (e.g., reference to the employer's leave policy, study incentive system, etc.)

Degree Requirements

Full-time Ph.D. students must complete their degree within six years. Flexible-time Ph.D. students must complete their degree within eight years. Degree requirements for both programs are the same. The Ph.D. involves six to eight half-courses (depending on previous experience and academic qualifications), comprehensive examinations and a thesis embodying the results of an original investigation, and a final oral examination on the content and implications of the thesis. Students must take a minimum of four half-courses within the SLE Program. Students are required to take 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 fulfil this requirement: CTL 1018H, CTL 1306H, CTL 2007H, CTL 3019H, CTL 3800H, CTL 3803H, CTL 3807H, CTL 4005H, CTL 4802H, AEC1400H, HDP 1287H, HDP 1288H.

A student wishing to propose an alternative course to fulfil 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. For the full-time Ph.D., 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.

Courses of Instruction

Not all courses are offered every year. Please consult the Department for course offerings.

Master's Level

JHC 1251H Reading in a Second Language/ E. Geva

JTE 1952H Language Culture and Education/ M. Heller

CTL 3000H Foundations of Bilingual and Multicultural Education/Staff

CTL 3001H Research Colloquium in Second Language Education: Master's Level/S. Lapkin, M. K. Swain

CTL 3002Y Methodology and Organization of Second-Language Teaching/ A. Cumrning, B. Harley, or Staff

CTL 3004H Language Awareness and its Role in Teacher Development/J. P. B. Allen

CTL 3005H Current Issues in English as a Second Language/J. P. B. Allen

CTL 3007H Seminar in Language and Communication/J. P. B. Allen

CTL 3007H Seminaire sur le langage et la communication/N. Labrie

CTL 3008H Critical Pedagogy, Language, and Cultural Diversity/J. P. Cumrnins

CTL 3010H Second-Language Learning/ N. Spada

CTL 3011H Bilingual Education and Bilingualism/J. P.Cummins

CTL 3011H Bilinguisme et education/ N. Labrie ou membre de la faculte a determiner

CTL 3012H Communicative Competence/ N. Labrie

CTL 3013H Second Language Assessment/ A. Cumming or S. Lapkin

CTL 3014H Collaborative Learning in Second-Language Classrooms/M. K. Swain

CTL 3015H Seminar in Second-Language Literacy Education/B. Burnaby, A. Cumrning, J. Curnmins

CTL 3018H Language Planning and Policy/ N. Labrie

CTL 3018H Politique et amenagement linguistique/N. Labrie

CTL 3019H Research Themes in Canadian French as a Second Language Education/S. Lapkin

CTL 3020H Writing in a Second Language/ A. Cumrning or S. Lapkin

CTL 3021H Pedagogical Grammar of French/ S. Lapkin

CTL 3023H Sociolinguistique du franqais canadien/N. Labrie

CTL 3024H Second Language Teacher Education/A. Gagne

CTL 3797H Practicum Second Language Education: Master's Levellstaff

CTL 3798H Individual Reading and Research in Second Language Education: Master's Level /Staff

CTL 3799H Special Topics Second Language Education: Master's Levellstaff

Doctoral Level

CTL 3800H Second Language Classroom Research/M. K. Swain

CTL 3801H Research Colloquium in Second Language Education: Doctoral Level/M. K. Swain, S. Lapkin

CTL 3803H Ethnographic Research in the Language Disciplines/Staff

CTL 3805H Aspects of Second-Language Acquisition/N. Spada

CTL 3806H Sociocultural Theory and Second Language Learning/M. K. Swain

CTL 3807H Processing Second Language Data/A. Cumming

CTL 3997H Practicum Second Language: Doctoral Level/staff

CTL 3998H Individual Reading and Research in Second Language: Doctoral Levellstaff

CTL 3999H Special Topics in Second Language Program: Doctoral Level/staff

Other Courses

EAS 1353H Theory and Practice of Japanese Language Instruction/ Y. Johnson

FRE 1108H Theorie linguistique et acquisition du francais langue seconde

COLLABORATIVE PROGRAMS

CTL also participates in the following collaborative graduate degree programs. For more information, consult the separate entries in this calendar.

Comparative, International and Development Education

The Departments of Curriculum, Teaching and Learning; Adult Education and Counselling Psychology; Sociology and Equity Studies in Education; and Theory and Policy Studies in Education jointly offer graduate degree programs (M.Ed., M.A., Ed.D., Ph.D.) in Comparative, International and Development Education. Additional information is available in the "Collaborative Graduate Degree Programs" section of the OISE/UT Bulletin, and the Comparative, International and Development Education entry in this calendar. Interested candidates should forward an application to the OISE/UT department of their choice as well as the CIDE Program Coordinator. Prospective applicants are strongly advised to contact the CIDE Program Coordinator before submitting their application; information is also available from the CTL Graduate Studies Liaison.

Women's Studies

The Departments of Curriculum, Teaching and Learning; Sociology and Equity Studies in Education; and Theory and Policy Studies in Education participate in the Women's Studies Collaborative Program (M.Ed., M.A., Ed.D., Ph.D.). Interested students should forward an application to both an OISE/UT department and the Program Director of Gr/aduate Women's Studies. All programs of study should be planned in consultation with program advisors in the CTL Department and with the GWS Coordinator of Graduate Studies. Further information is available in the Women's Studies entry in this calendar; also contact the CTL Graduate Studies Liaison and the GWS Program Director.

Dentistry DEN

Graduate Faculty

Full Members

J. E. Aubin, BSc, PhD
T. Bressmann, MA, MSc,PhD
R. F. Casper, MD, FRCSC
D. G. Cvitkovitch, BSc, MSc, PhD, Canada Research Chair (Coordinator of Graduate Studies)
J. Davies, BSc, PhD, BDS, DSc
D. A. Deporter, DDS, PhD, DipPerio
0. M. El-Mowafy, DDS, PhD, FADM
R. P. Ellen, DDS, CertPerio, CertOralMed&Microbio
E. D. Fillery, BSc, PhD
S. Friedman, DMD
M. D. Grynpas, MSc, PhD
J. N. Heersche, BSc, PhD
J. W. Hu, BSc, MA, PhD
D. J. Kenny, BSc, DDS, DipPaedo, PhD
J. L. Leake, MSc, DDS, DDPH, FRCD(C)
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H. Limeback, BSc DDS, PhD
D. Locker, BDS, PhD (Chair)
M. Manolson, BS, PhD
C. A. McCulloch, BSc, DDS, PhD, FRCD(C)
D. Mock, DDS, PhD, FRCD(C)
R. M. Pilliar, BASc, PhD, PEng
J. P. Santerre, BSc, MScEng, PhD
Y. Seltzer, DMD, Canada Research Chair
B. J. Sessle, BDS, BSc, MSD, PhD, FRSC, Canada Research Chair
A. Seth, BSc, MSc, PhD
J. Sodek, BSc, PhD
H. C. Tenenbaum, DDS, DipPerio, PhD, FRCD(C)
X. M. YU, MD, MSc, DScH
G. A. Zarb, BCHD, MSc, DDS, MSc, FRCD(C)

Members Emeriti

A. Bennick, MSc, DDS, PhD, DipPerio
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R. B. Ross, DDS, MScD, DIPORH, FRCD(C)
D. G. Woodside, BSc, DDS, MScD, PhD, FADM

Associate Members

J. D. Anderson, BSc, DDS, MScD
G. I. Baker, DDS, MS, FRCD(C), FICD
I. Barzilay, DDS, CertProstho, MS
G. C. Bradley, MSc, DDS, FRCD
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S. Cheifetz, PhD
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R. D. Diwan, BDS, PhD
W. El-Badrawy, DDS., MSc.
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G. V. Kulkami, BDS, LLB, MSc, DipPaedo, PhD
A. Laporte, PhD
H. P. Lawrence, DDS, CertifRestorDentistry, CertifPlanningSystems&ServDentCare, MSc, PhD
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A. Metaxas, DDS, Diportho, MSc, DDent
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L. E. Tam, DDS, MSc
K. C. Titley, BDS, LDS, RCS, DipPaedo. FRCD(C), MScD
B. Tompson, DDS, DipPaedodont, DipOrthodont
P. A. Watson, DDS, MScD
R. Wood, DDS, MSc, DipOralRad, PhD, FRCD(C)
G. Yared, DDS, MSEndo
R. Zohar, DMD, PhD, FRCD(C)

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Web: www.utoronto.ca/dentistry

The Faculty of Dentistry offers a graduate program leading to either a Master of Science or Doctor of Philosophy degree. This graduate program is intended for:

1 students 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 students, 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.

Degree of Master of Science

1 Thesis Option

Admission Requirements
Candidates shall hold a four-year Bachelor of Science degree, Doctor of Dental Surgery, or an equivalent degree, with at least mid-B standing from a recognized university in a discipline appropriate to the field of dentistry.

Program Requirements
The program will ordinarily require 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. The first year of the program will include development of a research project and proposal, and course work, while the second year will be devoted largely to research and thesis completion and defence. 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 half-course. Exemptions may be granted for previously completed course work at the bachelor's level.

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.

Admission Requirements
Candidates shall hold the degree of Doctor of Dental Surgery or an equivalent degree, with at least a mid-B standing from a recognized university.

Program Requirements
The program requires two to four years of full-time registration, depending upon the clinical specialty, and involves completion of an original research project culminating in an oral defence of a written thesis, and completion of clinical and didactic course work requirements as necessary to meet Canadian Dental Association accreditation requirements for the chosen clinical specialty. In addition, students must fulfil the requirements of the obligatory 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 M.Sc. 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 Specialist Dental Training - Course Work Only Option
The Department also 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.

Admission Requirements
Candidates shall hold the degree of Doctor of Dental Surgery, or an equivalent degree, with at least a mid-B standing from a recognized university.

Program Requirements
The program requires two to four years of full-time registration, depending upon the clinical specialty, entails completion of all clinical and didactic course work necessary for accreditation in the chosen specialty along with three half-courses in clinical, epidemiological, or basic science research methodology appropriate for clinical or public health practice, and a 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.

Program Transfer - M.Sc. to Ph.D.
M.Sc. 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 M.Sc. to the Ph.D. program. Transfer time varies for candidates 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 M.Sc. program for registrants in the M.Sc. Specialist Dental Training - 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 Ph.D. degree, but

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

may apply to the Ph.D. program following completion of the M.Sc. degree.

Degree of Doctor of Philosophy

1 Full-Time Research Option

Admission Requirements
Candidates are normally admitted to a four-year Ph.D. 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 candidate 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
Candidates 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 include completion of the course DEN 1100Y° *Doctoral Seminars in Oral Health Sciences,* plus one additional full course. Exemptions may be granted for MSc. course work from closely related disciplines. This includes students transferring from M.Sc. to Ph.D. programs. Programs of study for B.Sc. 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 18 months of starting a Ph.D. program, candidates will normally be required to 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. Candidates are also expected to:
a participate in all graduate research activities of the advisor's research group;
b present at meetings and publish original research findings in timely fashion; and
c participate as members of departmental and student committees as applicable.

In all cases, candidates will 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 semi-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 Ph.D. 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.

Admission Requirements
The minimum entry requirement is a 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
Programs require completion of an original research project culminating in an oral defence of a thesis. Minimum course requirements include completion of the course DEN 1100Y° *Doctoral Seminars in Oral Health Sciences,* plus one additional full course, together with, for the chosen clinical specialty, completion of clinical and didactic course work requirements.

All candidates will 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 18 months of starting the Ph.D. program, candidates will normally be required to 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. Candidates are also expected to:
a participate in all graduate research activities of the advisor's research group;

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

b present at meetings and publish original research findings in timely fashion: and
c 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 Ph.D. degree by two years, depending upon the particular clinical specialty undertaken, and 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 Ph.D. program for selected students whose career goal is a full-time academic position in a clinical discipline. Candidates concurrently establish their teaching and academic credentials. The major goal upon program completion is to enable candidates to compete for university tenure-stream professorial positions in their clinical science discipline.

Admission Requirements

Applicants must meet all School of Graduate Studies and Graduate Department of Dentistry admission requirements for entry to the Ph.D. program. In addition, applicants must have attained a professional degree equivalent to the University of Toronto D.D.S. and a graduate degree equivalent to the University of Toronto M.Sc. Preference is given to:
a 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
b applicants who hold a university appointment in Canada at an academic standard equivalent to the University of Toronto Lecturer.

Program Requirements

The program, which is dedicated to research experience, does not involve clinical training other than clinical research methodology, and entails completion of the research and course work requirements for the Ph.D. degree half time, while teaching in a clinical discipline half time.

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

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 Ph.D. is one year, the anticipated completion date for the flexible-time Ph.D. program will be within five to six years from the registration date. The maximum time for completion will normally be eight years.

Candidates 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 one additional full course. As with other options in the Ph.D. program, candidates will normally be required to pass a qualifying oral examination 12 to 18 months after commencement to demonstrate an adequate capacity for oral health sciences research at the doctoral level. They are also expected to:
a participate in all graduate research activities of the advisor's research group;
b present at meetings and publish original research findings in timely fashion: and
c participate as members of departmental and student committees as applicable.

Collaborative Programs

The Department participates in the following collaborative programs:
1 Aging and the Life Course
2 Biomedical Engineering
3 Neuroscience
For more details, consult the separate entries in this calendar.

Courses of Instruction

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, critiques on student presentations, and participation in Research Day. These seminars are required as part of the program for all M.Sc. and Ph.D. students.

DEN 1001Y° Master's Seminars in Oral Health Sciences (Credit/No Credit)/Staff
DEN 1002H Oral Pathology/G. Bradley, Staff

DEN 1003H Preventive Dentistry/H. Limeback, Staff
DEN 1006Y Seminars in Dental Public Health/ J. Leake, Staff
DEN 1007H Oral Radiology/M. J. Pharoah, Staff
DEN 1011Y° Advanced Seminars in Oral Pathology/R. J. McComb, Staff
DEN 1012Y° Oral Medicine/D. Mock, Staff
DEN 1013Y° Oral Surgical Pathology/ R. J. McComb, Staff
DEN 1016H Occlusion: Function and Dysfunction/B. J. Sessle, Staff
DEN 1017H Temporomandibular Disorders/ Staff
DEN 1022H Investigating Pathogenic Biofilmsl R. P Ellen, Staff
DEN 1024H Experimental Methods in Caries Research/Staff
DEN 1030H Critical Appraisal and Evidence-Based Care/H. Lawrence, Staff
DEN 1040Y Dental Clinical Epidemiology and Biostatistics/H. Lawrence, J. Leake
DEN 1060H Oral Physiology: Sensory and Neuromuscular Function/B. J. Sessle
DEN 1070H Advances in Dental Materials Science/P. Santerre, Staff
DEN 1080Y Biology of Connective Tissues/ C. A. G. McCulloch, H. C. Tenenbaum
DEN 1081H Bone Interfacing Implants/J.E. Davies, Staff
DEN 1082H Biomaterials for Implant Treatment in Dentistry/J. Davies, R. Pilliar; P. Santerre P.A. Watson
DEN 1084Y Growth and Development of Head and Neck/B. Tompson, Staff
DEN 1097Y Advanced Oral Radiology/M. J. Pharoah, Staff
DEN 1098H Reading Course in Oral Biology/ Staff
DEN 1100Y° Doctoral Seminars in Oral Health Sciences (Credit/No Credit))/ Staff

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

Design and Manufacturing

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 Representatives:
A. N. Sinclair, BASc, MSE, PhD, PEng/Mechanical & Industrial Engineering
H. F. Kolodny, BEng, MBA, DBA, PEng/Management

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

Telephone: (416) 978-2922
Fax: (416) 978-3453
E-mail: admi@mie.utoronto.ca

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, 4 Taddle Creek Road

For information on the program's long term goals as well as details of other universities participating in ADMI, contact:
Mr. David Heaslip
Executive Director
Advanced Design and Manufacturing Institute
The Promontory II, Sheridan Science and Technology Park
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Web: www.admicanada.com

Introduction
The Advanced Design and Manufacturing Institute (ADMI) is a joint program in design and manufacturing 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.

Within the University of Toronto the degree designation is M.Eng.D.M. This joint program is fully described on the Web site, www.admicanada.com, and has been 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. The program is conveniently accessed in compressed time frames of two four-day weekend modules for each course offering. This allows practising engineers to continue with their professional employment while working toward the M.Eng.D.M. degree. Courses are offered throughout the year and the schedule is updated on the Web site. The joint nature of the program ensures that the very best expertise available at each of the participating schools is integrated into the various course offerings.

The ADMI vision is to create a new generation of Canadian design and manufacturing engineers with the ability and mindset to propel Ontario industry into a world leadership position. The collective resources of partner universities and industry are leveraged to provide participants with access to an integrated program of world class technology, expertise, and experience.

ADMI is the creative result of innovative thinking and leadership from the engineering schools at McMaster University, Queen's University, the University of Toronto, the University of Waterloo, and the University of Western Ontario; the Schools of Business at McMaster University and the University of Toronto; and the Department of Management Sciences at the University of Waterloo. The program has the enthusiastic endorsement of Materials and Manufacturing Ontario and Ontario Industry.

Due to the part-time modular nature of the ADMI program, it is available only to Canadian citizens and permanent residents of Canada.

Admission Requirements
Candidates entering the program at the University of Toronto are required to register in the Department of Mechanical and Industrial Engineering. Candidates must have successfully completed a 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. Additionally, all individuals seeking admission into this program will normally have

three years of post-baccalaureate experience in industry or the equivalent. Preliminary application forms are available electronically on the Web site, www.admicanada.com.

Program Requirements

The program requires the successful completion of 10 ADMI course offerings. A list of course offerings, along with course descriptions and a current schedule, is available on the ADMI Web site, 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.

Part-time Nature of Program

The program is designed as a part-time program for individuals who wish 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 also offered throughout the year and do not conform to the regular university semester structures.

Fee Structure

The program is offered as a full cost recovery program. The fee per course is $2,500, which must be paid in advance of each course taken by the participant.

Courses of Instruction

A list of course offerings, along with course descriptions and a current schedule, is available on the ADMI Web site, www.admicanada.com.

Developmental Biology (Collaborative Program)

Program Committee

P. D. McCourt, PhD, NSERC Performance Plants Chair in Plant Genetics, Canada Research Chair/Botany
G. L. Boulianne, BSc, PhD/Molecular & Medical Genetics
A. M. Spence, BSc, PhD/Molecular & Medical Genetics
M. Zhen, BSc, PhD, Canada Research Chair/Molecular & Medical Genetics
U. Tepass. MSc, PhD, CIHR Investigator/Zoology ***(Director)***
C. Comissoo,, BSs/Molecular & Medical Genetics ***(Student Representative)***

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Web: www.utoronto.ca/devbiol/

Nature of the Collaborative Program

The graduate departments of Biochemistry, Botany, Immunology, Laboratory Medicine and Pathobiology, Medical Biophysics, Molecular and Medical Genetics, Physiology, and Zoology participate in the Collaborative Program in Developmental Biology. This is a Ph.D. program only. Candidates 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. Upon successful completion of the Ph.D. requirements of the host department and the program, students receive the notation "Completed Program in Developmental Biology" on their transcript.

Program Requirements

Students must complete a Ph.D. thesis and any core courses as required by their host department. In addition, they must complete the interdepartmental course JDB 1025Y and the seminar course JDB 1026Y. These courses may be taken in place of some host department courses. Prospective students should contact the coordinator for more details on admission procedures and course requirements.

Courses of Instruction

The following courses are offered by the program every year.

JDB 1025Y Developmental Biology
JDB 1026Y° Student Seminars in Developmental Biology

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

Developmental Science (Collaborative Program)

Program Committee

J. E. Grusec, BA, PhD/Psychology (Director)
M. D. Lewis, BA, MA, PhD, CPsych/Human Development and Applied Psychology

Collaborative Program in Developmental Science
Telephone: (416) 978-3404
Fax: (416) 978-4811
E-mail: grad@psych.utoronto.ca,
gradstudy@oise.utoronto.ca
Web: www.psych.utoronto.ca/~devsci/

Nature of Collaborative Program

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 multidiscipline foundation for understanding human development and disseminating the benefits of that understanding.

The Collaborative Program is intended to prepare 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.

Application Procedures

Candidates 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. and Ph.D. candidates 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. As well, 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.

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.

Program Requirements

Master's Program

Master's students follow the requirements of the department in which they are registered, which includes:

1 Two core courses: JDS 1233H *Cognitive Development and Applications* and JDS 1249H *Social-Emotional Development and Applications,*

2 attendance at a monthly colloquium series.

Doctoral Program

Doctoral students follow the requirements of the department in which they are registered, which includes:

1 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,

2 JDS 1233H *Cognitive Development and Applications* and JDS 1249H *Social-Emotional Development and Applications* (unless already completed at the master's level), and

3 attendance at a monthly colloquium series.

Drama DRA

Graduate Faculty

Full Members

A. L. Ackerman, BA, MA, PhD/English
V. Ambros, BA, MA, PhD/Slavic
E. K. Armatage, BA, MA, PhD/Drama
J. H. Astington, BA, MA, PhD/Drama
(Director)
G. Bisztray, PhD/Slavic
G. E. Clarke, BA, MA, PhD/English
N. E. Copeland, BA, MA, PhD/Drama
B. Corman, AB, AM, PhD/English
D. De Kerckhove, BA, MA, PhD, Dip 3eme Cycle, FRSC/French
A. H. de Quehen, BA, PhD/English
K. Eisenbichler, BA, MA, PhD/Italian
L. A. M. Hutcheon, BA, MA, PhD, University Professor, FRSC/English
S. B. Johnson, BA, MA, PhD/Drama
C. A. Keil, BA, MA, PhD/History
D. N. Klausner, AB, PhD/Medieval Studies
P. Kleber, BA, MA, PhD/Comparative Literature
R. Knowles, MA, PhD/Drama
A. C. Lancashire, BA, AM, PhD/English
D. I. Lancashire, BA, MA, PhD/English
A. M. Leggatt, BA, MA, PhD/English
J. L. Levenson, BA, MA, PhD, FRSC/English
M. O'Neill-Karch, MA/French
M. A. Parker, BA, MM, PhD, ARCT/Music
A. Percival, BA, MA, PhD/Spanish
D. Pietropaolo, BSc, MA, PhD/Italian
R. Plant, BA, MA, PhD/Drama
S. J. Rupp, BA, MA, MPhil, PhD/Spanish
P. Sperdakos, BA, MA, PhD/Drama
(Coordinator of Graduate Studies)
H. L. Thomson, BA, MA, PhD/English
T. Trojanowska, BA, MA, PhD/Slavic

Members Emeriti

L. L. Marker/Drama
M. Sidnell, BA, MA, PhD/English

Associate Members

B. Barton, PhD
R. Espinet, BA, MA, PhD
A. Filewod, PhD
K. M. Gallagher, BA, BEd, MEd, PhD
D. Johnston, PhD
L. Katz, BA, PhD
J. Maxwell, BA
A. Most, BA, MA, PhD
S. Odom, PhD
D. Pietropaolo, MA
B. W. Testa, BA, MA
M. J. Warner, PhD

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The programs leading to the M.A. and Ph.D. comprise courses given within the Centre and drama courses offered by other graduate departments of the University. We assume that students will be building on the kind of foundation that would normally be laid in four years of undergraduate study with a concentration in dramatic literature. The intent of the programs is to further the academic study of theatre and drama at an advanced level in the program fields of theatre history, theory of drama, and dramaturgy. Within the parameters of these fields, the Centre supports research in such areas as the theory and analysis of performance, feminist theatre theory and practice, Canadian drama, and post-colonial theatre. 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 with professional companies at the Robert Gill and Studio theatres.

Application forms and all information necessary for application is available on the Centre's Web site at gradrama.sa.utoronto.ca. Applications received after February 1 may be too late for consideration for the Centre's first round of offers. Contact the Graduate Coordinator concerning deadlines and delays at gradcoord.graddrama@utoronto.ca

Admission Requirements

Applicants for admission to the Centre are considered under the general regulations if they meet the Centre's own requirements as stated below. Admissions are selective; possession of minimum qualifications does not guarantee acceptance.

Degree of Master of Arts

1 For admission to the M.A. program, applicants must meet the following standard, or its equivalent from a recognized university: a B.A.

from this University, with at least a B+ standing, comprising four years of undergraduate study, with a significant concentration in drama.
2 Normally the M.A. program requires one year of full-time study or the part-time equivalent. In some cases, candidates may be admitted to a two-year M.A. program, with additional course requirements. The Centre may prescribe certain courses in the individual programs of M.A. candidates.

Degree of Doctor of Philosophy
1 Applicants for admission to the Ph.D. program must fulfil the requirements for the M.A. in the Centre, or the equivalent from a recognized university, with at least an A- average standing. Applicants who have taken the M.A. through the Centre must be recommended for further study by the instructors whose courses they have taken. Applicants holding the M.A. of this University in a subject other than drama, or the equivalent from another university, will be considered for admission to the Ph.D. program in the light of their previous work and its relation to the Centre's requirements; additional course work may be required.
2 Exceptional students may be admitted directly to the Ph.D. program from the B.A. with a minimum A- overall average. The Centre will be especially interested in final grades for upper-level courses. Such applicants will apply to the M.A. program, but indicate in a separate letter to the Drama Centre that they wish to be considered for direct admission to the Ph.D. program. If accepted, students from the B.A. level will be expected to complete four courses in addition to the Ph.D. requirements listed below, including the theatre history requirement (for a total of seven), and satisfy the Centre's practical requirements for the theatre as determined on admission. Students accepted from the B.A. will be expected to maintain an A- average in their first four full courses in order to continue in the program. Students may elect to transfer to the M.A. after the first year of study. Work completed in the Ph.D. program will be credited towards the M.A.
3 Applicants must arrange to send two supporting letters of recommendation to the Graduate Coordinator of the Centre. Admission will be conditional upon satisfactory recommendation.
4 Applications must be accompanied by a statement of research intent.

Degree Requirements
In addition to fulfilling the general requirements of the School of Graduate Studies, degree candidates at the Drama Centre must qualify in the manner stated below.

Degree of Master of Arts
Candidates are required to:
1 complete at least four full-course equivalents, as approved by the Centre, including at least one full-course equivalent in the history of theatre and performance, and at least one half-course in the dramatic literature of a non-English-speaking culture;
2 spend at least one academic year or twelve months in full-time study, or the equivalent in part-time work;
3 satisfy the Centre's requirements of practical work in the theatre.

Degree of Doctor of Philosophy
Candidates admitted on the basis of an M.A. in Drama or the equivalent are required to:
1 complete four approved courses by the end of the second year, in addition to the courses required for the M.A., with an average standing of at least A-. The combined M.A. and Ph.D. courses must include the theatre history requirement, the dramaturgical requirement, DRA 1010Y Theory of Drama, DRA 6000Y Research Seminar, and must be chosen from more than one dramatic literature;
2 demonstrate reading knowledge of a language other than English by passing an approved language examination not later than the end of the first year of study. Candidates may also be asked to qualify in other program-related languages;
3 satisfy the Centre's requirement of further practical work in the theatre by the end of the second year;
4 pass comprehensive examinations;
5 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;
6 pass an oral examination on the subject of the thesis.

Although the program has been designed for completion in four years, some students may require a longer period to complete all of the requirements.

Candidates admitted on the basis of a B.A. are required to complete an *additional* four full-course equivalents, including the theatre history requirement, and to satisfy the Centre's practical requirements in the theatre, as determined on admission.

Regulations
It is expected that all parts of the comprehensive examinations will be taken no later than fall of the third year. Candidates who do not achieve required standing in any part of the comprehensive examinations will be allowed one further

opportunity to take the relevant examination again on the occasion immediately following.

An outline of the proposed research for the thesis, signed by a member of the faculty of the Centre, must be submitted to the Graduate Coordinator no later than April of the second year.

Six unbound copies of the thesis must be submitted to the Graduate Coordinator of the Centre no later than August 1 (for Fall Convocation), October 15 (for Mid-Winter Convocation), or February 1 (for Spring Convocation).

Women's Studies Collaborative Program

The Centre also participates in the Collaborative Graduate Program in Women's Studies that offers both M.A. and Ph.D programs. Students electing to pursue this option will be expected to enrol in required Women's Studies courses, in addition to satisfying the stated degree requirements in drama. Upon completion, they will receive a notation on their academic transcript regarding their participation in the program. Please consult the program's entry in this calendar for more details.

Courses of Instruction

Registrants are advised to confirm course offerings by consulting the Centre's Academic Handbook for Students, normally available by mid-summer.

Core Program

DRA 1001H History of the Theatre I/ J. Astington
DRA 1002H History of the Theatre Ill N. Copeland
DRA 1010Y Theory of Drama/S. Johnson
DRA 1021H Dramaturgy/L. Katz
DRA 1032H Reconsidering "Liveness": Performance and Representation/B. Barton
DRA 2011H Theatrical Performance and Reception/M. J. Sidnell
DRA 3019H Shakespeare in Modern Production/J, Astington
DRA 3115H Acting in Canada and the United States/P. Sperdakos
DRA 3211H Getting Physical: Performing the Body/B. Barton
DRA 4030Y Studies in Canadian Theatre and Drama/R. Plant
DRA 4031H Studies in Canadian Theatre and Drama I/R. Plant
DRA 4032H Studies in Canadian Theatre and Drama II/R. Plant
DRA 4057H Women Script History/ N. Copeland
DRA 4090Y Directed Reading/Theatre Research/Staff
DRA 4091H Directed Reading/Theatre Research/Staff
DRA 5000Y Theatre Practice I (Credit/No Credit)/Staff
DRA 5001Y Theatre Practice II (Credit/No Credit/Staff
DRA 6000Y Research Seminar (Credit/No Credit)/J. Astington

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
- History
- Italian
- Medieval Studies
- Slavic
- Spanish

Often given in translation, courses selected from non-English language and literature departments may be taken to satisfy the requirement (in the M.A., or the Ph.D. if not taken in the M.A.) that students enrol in a half-course in a dramatic literature other than in English. A listing of such courses, available in the coming academic year, will appear in the Centre's Academic Handbook for Students when it is published in mid-summer.

East Asian Studies EAS

Graduate Faculty

Full Members

T. J. Brook, BA, AM, PhD
J. S. Brownlee, BA, MA, MPh
E. Cazdyn, BA, MA, PhD
G. Crawford, BSc, MA, PhD
R. W. Guisso, BA, DPhil
M. Y. Johnson, BA,MA,PHD
K. Kawashima, BA,MA,PHD
J. Liu, BA, MA, PHD
N. E McMullin, BA, STB, MTh, PhD
A. Sakaki, MA, PhD
S. M. Sandahl, MA, DES, PhD
G. Sanders, BA, PhD
(Coordinator of Graduate Studies)
A. Schmid, BA, MA, PhD
(Chair)
V. T. Shen, BA, MA, PhD, Lee Chair
J. Song, MA, PhD
s. Uyenaka, BA, MA, PhD
C. Virag, MA, PhD

Members Emeriti

S. Arntzen, BA, MA, PhD
E. J. Baek, BA, MA, PhD
R. Chu, BA, BLS, MA
M. Dolezelova, MA, PhD
M. W. Donnelly, BS, Institute Certificate, MA, PhD,
David Chu Professor of Asia-Pacific Studies
V. C. Falkenheim, BA, MA, PhD
F.P Hoff, MA, PhD
A. V. Liman, MA, PhD
R. J. Lynn, BA, MA, PhD
K. Nakajima, BA, MA, MPh
L. C. Priestley, BA, AM, MA, MPhil, PhD
W. A. Schlepp, MA, PhD
R. Tsukimura, MA, PhD
D. B. Waterhouse, BA, MA, LRAM, FRSC

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Admission and Special Requirements

Candidates for the M.A. and Ph.D. degrees are accepted under the general regulations of the School of Graduate Studies and the regulations of the Department. It should be noted that our programs are based on the study of original texts and that they presuppose a knowledge of the relevant languages. Applicants must write a statement of approximately 500 words (two pages) setting out their main fields of interest and proposed course of study. Ph.D. applicants should also submit three letters of recommendation from scholars who have knowledge of their previous academic work; for M.A. applicants two letters will be sufficient. A sample of the applicant's writing (in English) should also be included. The deadline for applications is January 31 for admission in September.

Applicants to the M.A. program are expected to have completed a four-year University of Toronto B.A. degree, or its equivalent from a recognized university, in a Specialist or Major East Asian Studies program, with at least B+ standing in their final year.

The normal requirement for admission to the Ph.D. program is completion of the M.A. 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.

Non-native speakers of English are required to show that they have attained a score on the TOEFL (Test of English as a Foreign Language) of at least 600 on the paper-based test or 250 on the computer-based test, and a score on the TWE (Test of Written English) of at least 5.0, or comparable scores on similar tests.

Degree of Master of Arts

The M.A. program requires one year of full-time graduate study. It may be completed either through non-language course work or through a combination of non-language courses and a thesis; normally four full-course equivalents are required for students not writing a thesis, and two full-course equivalents for students writing a thesis. M.A. students will be required to select courses in consultation with the Coordinator of Graduate Studies.

Degree of Doctor of Philosophy

The Department requires Ph.D. candidates to complete a total of four non-language full-course equivalents to be selected in consultation with the Coordinator of Graduate Studies. Two full-course equivalents 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. Candidates are required to demonstrate an appropriate level of proficiency in two languages, other than English, relevant to their areas of study before taking their 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. The dissertation must be defended at an oral examination. Please consult the Departmental Web site for details of this and other requirements.

Collaborative Programs

The Department participates in the Asia-Pacific Studies Collaborative Program. For further details, consult the separate entry in this calendar.

Courses of Instruction

Below is a list of courses that 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 1603H Anthropology of South Korea/ J. Song
EAS 1610H Ethnography of Neoliberalism with a Focus on East Asia/J. Song
EAS 1424H Multitude, Labour Power, Population/K. Kawashima
COL 3380H Globalization and Culture/ E, Cazdyn
COL 5040H Marx, Deleuze and Empire/ E. Cazdyn

History

EAS 1140Y From Republic to People's Republic: The Chinese Revolution from 1895 to the Present/V: C. Falkenheim
EAS 1143Y Civilization in Medieval China/ R. Guisso
EAS 1173H,Y Modern Korean History Seminar/ A. Schmid
EAS 1174H,Y Rethinking Empire in East Asia/ A. Schmid
EAS 1314H Capitalism and Colonialism/ K. Kawashima
EAS 1675Y Topics in Chinese Social and Intellectual History 1500-1950/ Staff

Language

EAS 1040Y Elementary Vietnamese/Staff
EAS 1101Y Introduction to Classical Chinese/ Staff
EAS 1115Y Reading Japanese for Graduate Purposes (Credit/No Credit)/ Staff
EAS 1301Y Elementary Japanese for Graduate Studies I/Staff
EAS 1302Y Modern Standard Japanese for Graduate Studies II/Staff
EAS 1303Y Modern Standard Japanese for Graduate Studies III/Staff
EAS 1304Y Modern Standard Japanese for Graduate Studies IV/Staff
EAS 1312Y Introduction to Manchu/R. 1. Binnick
EAS 1501H,Y Intermediate Sanskrit Texts (formerly EAS 1105Y)/ S. Sandahl
EAS 2001Y Introduction to Classical Japanese/Staff
EAS 2002Y Intermediate Classical Chinese/ Staff
EAS 2003Y Advanced Sanskrit Texts I (formerly EAS 1106Y)/ S. Sandahl
EAS 2006H,Y Advanced Sanskrit Texts II (formerly EAS 2005Y)/ S. Sandahl
EAS 2007H Advanced Sanskrit Texts I S. Sandahl

Linguistics and Pedagogy

EAS 1349Y Pedagogical Grammar of Japanese/Staff
EAS 1352H Introduction to Japanese Linguistics: Syntax and Semantics/Y: Johnson

EAS 1353H Theory and Practice of Japanese Language Instruction/ Y Johnson
EAS 1452H,Y Japanese Linguistics I/ Y. Johnson

Literature

EAS1117H,Y Chinese Fiction: Its History and Art/Staff
EAS1137H,Y Chinese Poetics/Staff
EAS1151H,Y Chinese Poetry I/G. Sanders
EAS1152H,Y Chinese Poetry II/G. Sanders
EAS 1322Y The Kambun Tradition/Staff
EAS 1344Y Classical Japanese Poetry/Staff
EAS 1345H Readings in Japanese Literary Criticism/A. Sakaki
EAS 1444H The City, Body, and Text in Modern Japanese Literature/ A. Sakaki
JLA 1456H Japan As Seen By ?: Reference, Apparatus, Operation/A. Sakaki

Philosophy and Religion

EAS 1228H Topics in Chinese Ethical Theories/V. Shen
EAS 1226H Topics in Modern Chinese Philosophy/V. Shen
EAS 1227H Topics in Chinese Religions/ V Shen
EAS 1469H,Y Chinese Mahayana Buddhism/ V. Shen
EAS 1601Y Seminar in East Asian Buddhism/ Staff
EAS 1602Y Topics in Korean Thought/Staff
PHL 2015H Confucianism/Staff
PHL 2016H Taoism: Philosophy and Religion/ Staff
PHL 2017H Buddhism in China/Staff
RLG 3423H Religion in the Japanese Tradition/J. S. Brownlee
RLG 3713Y Hinduism and Politics/S. Sandahl

Politics

POL 2416Y Politics and Society in Contemporary China/V: C. Falkenheim

Research Seminars

EAS 1100H,Y Special Topics in Chinese Studies/Staff
EAS 1116H,Y Special Topics in Chinese Culture
EAS 1150H,Y Reading and Major Research Paper/Staff
EAS 1160H,Y Basic Topics in Chinese Culture/ Staff
EAS 1163H,Y Special Topics in Korean Studies/ Staff
EAS 1300H,Y Special Topics in Japanese Studies/Staff
EAS 1313Y Japanese Source Materials and Reference Works/Staff
EAS 1320H,Y Special Topics in Japanese Culture/ Staff
EAS 1323Y Readings in Japanese Documentary Source Materials/Staff
EAS 1999H,Y East Asian Studies Bibliography, Reference, and Research Methodology/Staff

Visual and Performing Arts

EAS 1229H Topics in Chinese Aesthetics/ J. Liu
EAS 1328H,Y Chinese Sculpture/K. Ruitenbeek
EAS 1339H Topics in Chinese Art Theories/ J. Liu
EAS 2003H Chinese Drama: Its History and Art/Staff

Economics ECO

Graduate Faculty

Full Members

V. A. Aivazian, BS, MA, PhD
G. J. Anderson, BA, MSc, PhD
W. M. Baker, BCom, MA, PhD, Royal Bank Chair in Public and Economic Policy
H. D. Benjamin, BSc, MA, PhD (Coordinator of Graduate Studies)
L. Brandt, BS, MS, PhD
J. L. Carr, BCom, MA, PhD
F. R. Casas, BA, MSc, PhD
M. G. S. Denny, BSc PhD
D. N. Dewees, BSc, LLB, BScEE, PhD
M. Faig, BA, MEc, PhD
D. K. Foot, BA, AM, PhD
C. S. Gourieroux, PhD, Prof, Paris IX/ENSAE
M. K. Gunderson, BA, MA, PhD, CIBC Chair in Youth Employment
G. Hamilton, MEc, PhD
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J. E. Pesando, BA, MA, PhD
C. Pitchik, BA, MSc, PhD
D. Puga, Ldo, MSc, PhD
F. J. Reid, BA, MSC, PhD
D. P. Restuccia, BA, MA, PhD
J. K. Roberts, BA, MA, PhD
S. Shi, BS, MA, PhD, Canada Research Chair
A. Siow, BA, PhD
M. Smart, BA, MA, PhD
M. Stabile, BA, MA, PhD
M. J. Trebilcock, LLB, LLM, FRSC, University Professor
D. Trefler, BA, MPh, PhD
M. A. Turner, BA, MA, PhD
A. J. Yatchew, BA, MA, PhD
X. Zhu, BSc, MSc, PhD

Members Emeriti

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S. M. Eddie, BS, PhD
J. E. Floyd, BComm, MA, PhD
M. A. FUSS, BSc, MA, PhD
G. K. Helleiner, BA, PhD, FRSC
S. Hollander, OC, BSc, PhD, FRSC, University Professor Emeritus
J. A. Hynes, BA
J. H. A. Munro, BA, MA, PhD
A. Rotstein, BA, PhD
A. M. Watson, BA, BCom, MA
T. A. Wilson, BA, AM, PhD, FRSC

Associate Members

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G. Indart, BA, MA, PhD
G. Kambourov, BA,MA,PhD
J. Maheu, BA, MA, PhD
P. Masson
A. S. Maynard, MA, MPh, PhD
R. McMillan, BA, PhD
S. F. Mechoulan, BA, MA, PhD
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The details of the programs are printed in the booklet *Economics Graduate Brochure* which is available from the Department of Economics. Details are also available on the Department's Web site.

Degree of Master of Arts

Admission Requirements

The minimum admission requirement to the M.A. programs is a four-year or honours degree (or equivalent) with at least a mid-B (75%) standing in the final year of the program. Applicants must have completed 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 in Economics
The minimum requirement is the completion of the math stat review and eight half-courses including the core courses micro, macro and econometrics. The program is normally completed in two sessions.

Program in Financial Economics
Consult the separate entry in this calendar.

Combined J.D./M.A. in Economics
The J.D./M.A. in Economics permits the completion of both degrees in three years rather than the four years it would take to acquire them independently. Applicants will be awarded places in the Combined J.D./M.A. program only after they have secured independent admission into the J.D. and the M.A. programs.

In addition to the math stat review, students must complete 6 half-courses in economics including the core courses, and 45 credits in law to satisfy the requirements as established for each degree program.

Asia-Pacific Studies Collaborative Program
This program normally takes 12 months to complete. In addition to the math stat review, students must complete six half-courses in economics, including the core courses and the course ECO 2738Y *Economic Development of China and Japan* for which a major research paper is required. They must also complete the year-long interdisciplinary seminar, ASI 1000Y *Issues in Asia-Pacific Studies,* and satisfy the program's language requirement. The language requirement consists of two to four half-courses, depending on the language of choice and the student's background. For further information, consult the Asia-Pacific Studies (Collaborative Program) entry in this calendar.

Environmental Studies Collaborative Program
The Department of Economics, in conjunction with the Institute for Environmental Studies, offers this 12-month program. Courses taken must include the math stat review, six half-courses from economics including the core courses and the course in environmental economics, and two half-courses approved by the Institute. An internship culminating in a research paper is also required. For further information, consult the Environmental Studies (Collaborative Program) entry in this calendar.

International Relations Collaborative Program
Applicants to this 16-month program are required to complete the math stat review and 7 half-courses in economics including the core courses and the course in international trade. They must also complete the two courses (a) History and Philosophy of International Relations Thought and (b) International Law I: Public International Law, in addition to two other courses designed specifically for the Collaborative Program. Students must also demonstrate competence in another language. For further information, consult the International Relations (Collaborative Program) entry in this calendar.

Degree of Doctor of Philosophy

Admission Requirements
Admission to the Ph.D. program is offered to excellent students who have completed an M.A. degree in economics by the time of enrolment. Applicants to the program must have attained at least a B+ standing at the M.A. level. Admission to the program is competitive. Those accepted into the doctoral program will normally have achieved a standing considerably higher than the minimum B+.

Program Requirements
The Ph.D. is a full-time program. Applicants must be registered as full-time students for a minimum period of three years. First-year students normally take two half-courses in microeconomics (ECO 2020H and ECO 2030H), macroeconomics (ECO 2021H and ECO 2031H), and econometrics (ECO 2400H and ECO 2401H). During the second year, each student chooses two field areas, taking the equivalent of three half-year courses in each. Each second-year and third-year student must also participate in the full-year graduate research seminar (ECO 4060Y°).

Suitable graduate level courses taken by a student in the M.A. program in the Department of Economics may fulfil some of the course requirements of the Ph.D. program.

The Ph.D. is a research degree which requires:
1 demonstration of competence in the core of the discipline and in two of its special fields;
2 a thesis based on original research.

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

Students are required to write and pass comprehensive examinations in micro, macro, and the major field by the end of the second year of study. Candidates for the Ph.D. must maintain a minimum average of 6+ throughout their course work. An original paper must be written in the second year of the Ph.D. program and presented in the relevant workshop in the fall of the third year. By the spring of the third year, Ph.D. candidates must submit a proposal to a formal dissertation committee.

Combined J.D./Ph.D. in Economics

The J.D./Ph.D. 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 J.D. degree and to reach all but the dissertation stage of the Ph.D. at the end of four years.

Students will be admitted to the Faculty of Law the first year and receive a deferred acceptance to the Ph.D. program. In the second and third years students will be considered registered in the Department of Economics and will complete the requirements of the first two years of the Ph.D. program. Students will complete their J.D. requirements in the fourth year and thereafter will be registered full-time with the Department of Economics.

Applicants must gain independent admission to both the J.D. program and the Ph.D. program in Economics. They must satisfy the normal admission requirements for each program.

Management and Economics Collaborative Ph. D. Program

Consult the separate entry in this calendar.

Courses of Instruction

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 M.A. Students (Credit/No Credit)
ECO 1011H Mathematics for Ph.D. Students (Credit/No Credit)

A 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 M.A. students only)
ECO 2061H Economic Theory—Macro (for M.A. students only)

B *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

C *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

D *Economic History*

ECO 2210Y Topics in the Economic and Social History of Later Medieval Europe, 1250-1600
ECO 2214Y The International Economy, 1870-1970
ECO 2234H Topics in North American Economic History
ECO 2236H The Modernization of the European Economy, 1750-1939
ECO 2250H Workshop in Economic History (Credit/No Credit)

E 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

F 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 M.A. students only)

ECO 2410H Applied Econometrics
ECO 2411H Financial Econometrics

G 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
ECO 2506H Economics of Financial Risk Management
ECO 2550H Workshop in Monetary and Macro Economics (jointly with Institute for Policy Analysis) (Credit/No Credit)

H 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

I Economic Development

ECO 2700H Economic Development I
ECO 2701H Economic Development II
ECO 2703H Topics in Development Economics
ECO 2704H Topics in Economic Growth
ECO 2738H Economic Development of China and Japan
ECO 2770H Workshop in Economic Development (Credit/No Credit)
JPE 2408Y The Political Economy of Development

J 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

K 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)

L Law and Economics

ECO 3501H Economic Analysis of taw
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 4052Y Reading Course in an approved special field#
ECO 4060Y° Graduate Research Seminar (Credit/No Credit)

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

#The Department is normally prepared to supervise reading courses in economic theory, international trade theory and policy, monetary economics, economic history, public economics, environmental economics, African and Latin American economic development, and labour economics. Other fields can often be arranged. Reading courses are available only to students who have the requisite preparation and only at the discretion of faculty members.

Editing Medieval Texts (Collaborative Program)

Program Committee

J. C. Magee, BA, MA, PhD/Classics
W. R. Robins, BA, MPhil, PhD/English (Director)
M. D. Meyerson, BA, MA, PhD/History
M. Lettieri, BA, MA, PhD/Italian Studies
D. R. Townsend, BA, MA, PhD/Medievai Studies
A. P. M. Orchard, BA, MA, PhD/Medieval Studies
W. R. Bowen, BA, BMus, MA, PhD/Music
P. King, PhD/Philosophy
J. W. Goering, BA, MAR, MA, MSL, PhD/Religion
J. Blackmore, BA, MA, PhD/Spanish

Address:
Collaborative Program in Editing Medieval Texts
Centre for Medieval Studies
39 Queen's Park Crescent East
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M5S 2C3

Telephone: (416) 978-4884
Fax: (416) 971-1398
E-mail: medieval @ chass.utoronto.ca
Web: www.chass.utoronto.ca/medieval/

Nature of Collaborative Program

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.

Application Procedures

Candidates 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 should take the Centre for Medieval Studies' M.A.-level 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 may apply for admission to the Collaborative Program as soon as they have passed the M.A.-level Latin examination. Applications should be addressed to the Program Committee, Collaborative Program in Editing Medieval Texts, Centre for Medieval Studies.

Admission Requirements

Students must already be admitted to the doctoral stream of one of the collaborating graduate units: Classics, English, French Language and Literature, History, Italian Studies, Medieval Studies, Music, Philosophy, Religion, or Spanish.

Program Requirements

1 Prerequisite: MST 1000Y or a pass in the Centre's M.A.-level Latin examination (given in April and September).
2 MST 1104H and MST 1105H.
3 Two of the following half-courses:
MST 1107H, MST 1110H, MST 1101H.
4 Any other approved half-course in editing (including departmental courses) as listed below.
5 Participation in the required seminar in editorial practices and resources: MST 1111H Sources and Materials for Editing Medieval Texts.
6 An approved text edition undertaken as the dissertation, as a project for a course, or independently for a publishable article.

Courses of instruction

Italian Studies

ITA 1170H Editing Early Italian Texts

Medieval Studies

MST 1000Y Introductory Medieval Latin
MST 1101H Codicology
MST 1104H Latin Palaeography I
MST 1105H Latin Palaeography II
MST 1107H Latin Textual Criticism
MST 1110H Diplomatics
MST 1111H Sources and Materials for Editing Medieval Texts (prerequisite required)
MST 1113H Vernacular Text-Editing: A Collaborative Project
MST 1385H Theory and Practice in Editing of Old English Texts I
MST 3230H Law in Medieval Europe

Music

MUS 1138H Later Medieval Monophonic Notation
MUS 1245H Notation

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

Education

For admission and application inquiries contact:

The Ontario Institute for Studies in Education of the University of Toronto (OISE/UT)
Registrar's Office
Graduate Studies Admissions Unit
252 Bloor Street West
Fourth Floor, Room 4-485
Toronto, Ontario
Canada M5S 1V6

Telephone: (416) 923-6641 ext. 2663
Fax (416) 323-9964
E-mail: gradstudy@oise.utoronto.ca
Web: www.ro.oise.utoronto.ca

On July 1, 1996, the Ontario Institute for Studies in Education (OISE) and the Faculty of Education (FEUT) were integrated to form a new faculty within the University called The Ontario Institute for Studies in Education of the University of Toronto (OISUUT).

As one of the largest faculties at the University, and one of the largest faculties of education in North America, OISE/UT, comprising five academic departments, strives to be an effective, interactive learning community which, through research, scholarship, and excellent instruction, provides the theoretical knowledge base for education as a domain of advanced study and professional practice.

Brief introductions to each of OISE/UT's five departments are provided below. For further details on their programs, courses, and graduate faculty, please consult the individual departmental entry listed alphabetically in this calendar.

Adult Education and Counselling Psychology (AECP)
Web: www.oise.utoronto.ca/depts/aecp/

The Department of Adult Education and Counselling Psychology is the second largest of the five departments within OISE/UT and offers a full range of graduate degrees in each of two major programs:
1 Adult Education and Community Development
2 Counselling Psychology

AECP participates in the following collaborative programs:
- Addiction Studies
- Aging and the Life Course
- Community Development
- Comparative, International and Development Education
- Environmental Studies
- Women's Studies

Consult the separate entries in this calendar.

Curriculum, Teaching and Learning (CTL)
Web: www.oise.utoronto.ca/depts/ctl/

The Department of Curriculum, Teaching and Learning, the largest of the five departments within OISE/UT, offers graduate programs in:
1 Curriculum
2 Master of Teaching in Elementary and Intermediate Education
3 Second Language Education

The Master of Teaching degree leads to Ontario College of Teachers Certification.

CTL participates in the following collaborative programs:
- Comparative, International and Development Education
- Women's Studies

Consult the separate entries in this calendar.

CTL offers numerous learning opportunities in research and field development, and through off-campus and distance learning courses.

Human Development and Applied Psychology (HDAP)
Web: www.oise.utoronto.ca/depts/hdap/

The Department of Human Development and Applied Psychology offers graduate degrees in several programs which prepare individuals for research and professional practice in the fields of:
1 Child Study and Education
2 Developmental Psychology and Education
3 School and Clinical Child Psychology

The Child Study and Education program offers a Master of Arts degree in a two-year initial teacher education program leading to Ontario College of Teachers Certification.

HDAP participates in the Developmental Science Collaborative Program. Consult the separate entry in this calendar.

Sociology and Equity Studies in Education (SESE)
Web: www.oise.utoronto.ca/depts/sese

The Department of Sociology and Equity Studies in Education is the smallest OISE/UT department and offers a close working relationship between students and faculty. SESE offers graduate programs in sociology in education with an emphasis on equity issues.

SESE participates in the following collaborative programs:
- Comparative, International and Development Education
- Environmental Studies
- Women's Studies

Consult the separate entries in this calendar.

The Department is organized as a constitutional democracy in which students, staff, and faculty participate in all major decisions affecting the Department.

Theory and Policy Studies in Education (TPS)
Web: www.oise.utoronto.ca/depts/tps/

The Department of Theory and Policy Studies in Education houses three graduate programs:
1 Educational Administration
2 Higher Education
3 History and Philosophy of Education

TPS participates in the following collaborative programs:
- Comparative, International and Development Education
- Women's Studies

Consult the separate entries in this calendar.

TPS also offers numerous research opportunities; off-campus, distance learning courses; and cohort-based programs.

Electrical and Computer Engineering ECE

Graduate Faculty

Full Members

P. Aarabi, BASc, MASc, PhD, Canada Research Chair
T. Abdelrahman, BSc, MSc, PhD, PEng
J. S. Aitchison, BSc, PhD, Nortel Institute Chair in Emerging Technology
R. M. Baecker, BS, MSc, PhD
B. L. Bardakjian, BEd, BSc, MASc, PhD, PEng
G. Bendzsak, BSc, MSc, PhD, PEng
B. Benhabib, BSc, MSc, PhD, PEng
A. Bilas, Dipl CS&E, MA, PhD
F. Blake, BASc, MASc, PhD, PEng
R. R. Bonert, DipEng, PhD, PEng
M. Broucke, BSEE, MS EECS, PhD EECS
S. D. Brown, BSc, MASc, PhD
A. Chan Carusone, BASC, PhD
P. Chow, BASc, MASc, PhD
E. J. Davison, BASc, MA, PhD, ScD, FIEEE, PEng
F. P. Dawson, BASc, BSc, MASc, PhD, PEng, Dusan and Anne Miklas Chair in Engineering Design
S. M. Easterbrook, Bsc, PhD
M. Eizenman, BASc, MASc, PhD
G. V. Eleftheriades, DipEE, MS, PhD
D. Etiemble, BASc, PhD
E. L. Fiume, BM, MSc, PhD
B. A. Francis, BASc, MEng, PhD, FIEEE
R. Frecker, BSc, MD, PhD, LMCC
J. Frey, Bsc, MSc, PhD
A. A. Goldenberg, Bsc, MSc, PhD, FIEEE, PEng
P. G. Gulak, BASc, MSc, PhD, PEng, L. Lau Chair
D. Hatzinakos, DipEE, MASc, PhD, PEng
A. S. Helmy, BSc. (Cairo), M.Sc.(Glasgow), Ph.D. (Glasgow)
P. R. Herman, BEng, MSc, PhD, PEng
M. R. Iravani, BSc MSC, PhD
H. A. Jacobsen, BS, MS, PhD
D. A. Johns, BASc, MASc, PhD
M. Joy, BSc, MASc, PhD, PEng
A. Konrad, BEng, MEng, PhD, FIEEE, PEng
F. R. Kschischang, BASc, MASc, PhD, PEng, Canada Research Chair
D. Kundur, BASc, MASc, PhD, PEng
H. Kunov, MSc, PhD, PEng
R. H. Kwong, SB, SM, PhD
J. D. Lavers, Bsc, MASc, PhD, FIEEE, PEng (Associate Chair, Graduate Studies)
P. W. Lehn, BScEE, MSc, PhD
A. Leon-Garcia, BSc MS, PhD, FIEEE
D. M. Lewis, BASc, PhD
T. J. Lim, BA, PhD
H. K. Lo, B.A., M.S., Ph.D.
J. Long, BSc, MEng, PhD
M. Maggiore, MS, PhD
A. Mandelis, BSc, MA, MSc, PhD, FAPS
S. Mann, BSc, BEng, MEng, PhD
K. Martin, BASc, MASc, PhD, FIEEE, Stanely Ho Professor of Microelectronics
M. Mojahedi, BS, MS, PhD
I. Nachman, BSc, MA, PhD
N. Najm, BE, MS, PhD
W. T. Ng, BASc, MASc, PhD, PEng
S. Pasupathy, BE, MTech, MPhil, PhD, FIEEE, PEng
K. Phang, BASc, MASc, PhD
K. Plataniotis, BEng, MSEE, PhD
J. S. Rose, BASc, MASc, PhD (Chair)
H. E. Ruda, BSc, PhD
C. A. Salama, BASc, MASc, PhD, FIEEE, PEng, University Professor, J. M. Ham NSERC/Nortel Industrial Research Chair
E. Sargent, BScEng, PhD, Canada Research Chair
A. S. Sedra, BSc, MASc, PhD, FIEEE, PEng
K. C. Sevcik, BS, MS, PhD
A. Sheikholeslami, BSc, MASc, PhD
P. W. Smith, BSc, MSc, PhD, FIEEE
E. S. Sousa, BASc, MASc, PhD, PEng, Bell Canada University Labs Chair in Computer Engineering
M. Stumm, DipMath, PhD
D. Terzopoulos, MEng, PhD
S. Valaee, BScEE, MSEE, PhD
T. E. Van Deventer, BSE, MSEE, PhD, PEng
A. Veneris, DiplCS&E, MSc, PhD
A. N. Venetsanopoulos, DipEng, MS, MPhil, PhD, FIEEE, PEng, Bell Canada Chair in Multi-media
J. J. Vicente, BASc, MS, PhD
M. VOSS, BEE, MSEE, PhD
Z. G. Vranesic, BASC, MASC, PhD, PEng
w. Wong, BSc, MSc, PhD
D. B. Wortman, BE, MS, PhD
S. G. Zaky, BSc, MASc, PhD, PEng
S. Zukotynski, Magister, PhD, PEng

Members Emeriti

K. G. Balmain, BASc, MS, PhD, FIEEE, PEng, NSERCI Bell Canada Industrial Research Chair in Electromagnetics
P. I. Boulton, BASc, MASc, PhD, PEng
S. B. Dewan, BSc, ME, MASc, PhD, FIEEE, PEng
K. lizuka, B.Sc., M.Eng., M.S., Ph.D.
W. Janischewskyj, BASc, MASc, FIEEE, PEng
E. S. Lee
V. M. Ristic, Diplng, Magister, MSc, PhD
A. Semlyen, DipLEng., Ph.D.
G. R. Slemon, BASc, MASc, PhD, DSc
W. M. Wonham, BEng, PhD, FIEEE, PEng, University Professor

Associate Members

S. Adve, BTech, PhD
C. Amza, B.S. (Bucharest), M.S. (Rice), Ph.D. (Rice)
G. Anders, M.ENG. (LODZ), M.A., PH.D., F.I.E.E.E.

T. Chau, BASc, MASc, PhD
S. W. Davies, BSc, MSc, PhD, MBA
S. Davis, BScEng, MScEng, MEA, PhD
A. Goel
B. Li, BE;MS, PhD
J. F. Lie, B.A.SC., M.S., Ph.D.
W. J. MacLean, BASc, MASc, Ph.D.
A. S. Morched, BSc PhD, DSc
A. Moshovos, BS, MSc, PhD
A. Prodic, B.S.(Novi Sad), M.S.(Colorado, Boulder), Ph.D. (Colorado, Boulder)
L. Qian, B.A.Sc., M.A.Sc., Ph.D.
K. Truong
J. Zhu, BS, MS, PhD

Address:
Edward S. Rogers Sr. Department of Electrical and Computer Engineering
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University of Toronto
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Canada
M5S 3G4

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Fax: (416) 971-2993
Web: www.ece.utoronto.ca

Areas of Study

The Edward S. Rogers Sr. Department of Electrical and Computer Engineering offers graduate courses and research opportunities in:

Communications: multimedia systems ; digital signal processing; digital filters; neural networks; image processing and coding; video compression; data compression; digital communications; information theory; error control coding; communications algorithms; radar-sonar systems; satellite communications; mobile and fixed wireless systems; spread spectrum systems; CDMA, PCS; radio networks; communication networks; broadband networks; light wave networks; network management and control; internetworking; integrated services ATM and IP networks; multimedia networks.

Computer Engineering: computer architecture; operating systems; systems programming; optimizing and parallelizing compilers; language processors; computer networks; computer security; distributed systems; parallel systems; reliability and diagnosability; non-binary logic; digital circuits; computer-aided design for VLSI; computer applications; field-programmable gate arrays and systems; reconfigurable computing; CAD for VLSI synthesis, testing; human-computer interaction; image processing architectures; computer vision.

Electromagnetics: field theory and measurements; radiation and guided-wave phenomena; high-speed design; electromagnetic compatibility; antenna theory and design; computational electromagnetics; microwave and millimetre-wave integrated circuits and antennas; RF and wave electronics; microwave integrated circuits; novel micromachined components; terrestrial and satellite wireless applications; quasi-optics; ionospheric plasma waves; spacecraft electrostatic discharge; meta-materials; bioelectromagnetics.

Electronics: semiconductor device physics; transport and optical properties of semiconductors; solid-state transducers; linear and digital circuits; active, passive, and digital filters; integrated circuit design; VLSI design and technology; digital communication circuits; RF circuits; computer-aided circuit design and testing.

Energy Systems: power electronics; electric power systems; sustainable energy sources; distributed generation and storage systems; autonomous power systems; integrated switch mode power supplies; mixed signal integrated circuits and VLSI for power electronic applications; low-power portable power supplies; induction heating; ballasts for discharge lamps; electro-magnetic field-fluid interaction; magnetic materials and magnetic device modelling; linear motors; electric propulsion systems; electromechanical devices.

Photonics: optical fundamentals, design, modelling, and advanced fabrication technology are directed at a broad range of optical applications in light generation, amplification, transmission and processing, including all-optical communication networks, biophotonics on a chip, optical sensors, nonlinear optics, lasers and amplifiers, photonic bandgap and metamaterial devices, nanophotonics, optical quantum computing, ultrafast optical science, efficient solar cells, novel photovoltaics, and laser nanofabrication.

Systems Control: control of multivariable, discrete-event, nonlinear, hybrid, and stochastic systems; applications to optical communications networks; large-scale system theory; decentralized control; process modelling and identification; fault diagnosis; adaptive signal processing and control; control of queuing systems; interactive computer-aided design; microprocessor control systems; optimization and

simulation; robotics; urban traffic control; power system control; biological modelling; control of formations of autonomous vehicles; control of communication and computer networks.

Biomedical Engineering: Facilities for interdisciplinary study and research are available through the Institute of Biomaterials and Biomedical Engineering: acoustics and hearing; clinical engineering; Doppler ultrasound and biofluid mechanics; drug delivery systems; eye positioning measurement and vision; modelling of biological clocks; medical imaging; rehabilitation engineering; sensory theory and computational neuroscience; proteomics and bioinformatics; DNA sequencing.

ECE Colloquium

During the first year of registration, M.A.Sc. and Ph.D. students are required to attend the ECE Colloquium which includes a seminar on ethics in research.

Degree of Master of Engineering in Telecommunications

The M.Eng.Tel. is a unique graduate degree program designed to prepare telecommunications and networking professionals to practice in the environment of competing technologies, standards, business models and network and service visions. The program leverages on the strengths of the university and its industry partners through lectures that are delivered by leading academics, industry experts, and top executives. The opportunity to network with professionals as well as with other students provides a broad view of the industry.

Degree of Master of Engineering

The general regulations for the Master of Engineering degree are set out in this calendar. A candidate will enrol in a field of study in consultation with a designated professor who will act as the supervisor throughout the student's candidacy. For students with adequate undergraduate preparation, the program will normally comprise nine half-courses, of which at least five must be from the Department of Electrical and Computer Engineering. With the approval of the student's supervisor, an engineering project may replace three of these half-courses.

The M.Eng. degree program may be taken on a full-time or part-time basis.

Degree of Master of Applied Science

Candidates for this degree are accepted under the general regulations. The work leading towards the degree of Master of Applied Science provides an opportunity for the student to pursue advanced studies in the particular field of major interest and an opportunity to engage in research and engineering design.

Each candidate's program of study must receive the approval of the Department of Electrical and Computer Engineering, and, in general, shall consist of a research or design project on which a thesis must be submitted, together with courses selected from the list below and elsewhere in this calendar.

For students with adequate undergraduate preparation, the M.A.Sc. program will normally comprise five half-year graduate courses and a 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. The Department reserves the right to require additional course work of students whose undergraduate preparation does not include the study of subjects deemed to be necessary for research in the field chosen.

Degree of Doctor of Philosophy

Candidates for this degree are accepted under the general regulations. Before acceptance as a candidate for the Ph.D. degree, the Department must be satisfied of the student's ability to do advanced work. Each candidate will be required to pass courses of study to satisfy the requirements of the general regulations and the specific requirements of the Department. The Ph.D. program will normally consist of five half-year graduate courses not previously used for other degree credit, and a thesis.

Some outstanding students may be permitted to transfer directly from the M.A.Sc. program to the Ph.D. program without completing the M.A.Sc. degree. Such students will be required to complete ten half-year graduate courses, unless they already hold a master's degree.

During the first year of registration as a candidate for the Ph.D. degree, 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 Graduate Studies Handbook.*

Collaborative Programs

The Department participates in the Biomedical Engineering Collaborative Program. For details, consult the separate entry in this calendar.

Courses of Instruction

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 participate in the non-credit seminar course JDE 1000H Ethics in Research during their first or second session of registration.

The Department should be consulted each session as to course offerings.

Energy Systems

ECE 533H Power Electronics/Staff
ECE 1041H Numerical Solution of Field Problems/A. Konrad, J. D. Lavers
ECE 1042H High-Voltage Engineering/ W. Janischewskyj
ECE 1049H Special Topics in Power Devices and Systems/Staff
ECE 1055H Dynamics of HVdc/ac Transmission Systems/M. R. Iravani
ECE 1057H Static Power Converters I-Principles of Operation and Applications/R. Iravani
ECE 1058H Static Power Converters II-Dynamics and Control/R. Iravani
ECE 1059H Special Topics in Power Systems/ Staff
ECE 1063H Application of Power Devices/F.P? Dawson, W. T. Ng
ECE 1065H Custom Power Controllers/P.W Lehn
ECE 1066H Design of High-Frequency Switch-Mode Power Supplies (SMPS)/A. Prodic
ECE 1067H Switch-Mode Power Supplies (SMPC)/A. Prodic
ECE 1068H EMC in Power Engineering/F. P. Dawson
ECE 1072H AC Drive System Dynamics/ R. Bonert
ECE 1081H Application of the Finite Element Method to Field Problems/ A. Konrad, J. D. Lavers
ECE 1082H Mathematics for Advanced Electromagnetics/A. Konrad
ECE 1083H Harmonic Balance and the Finite Element Method/A. Konrad
ECE 1089H Special Topics in Electromagnetics/Staff

Electromagnetics

ECE 524H Microwave Circuits/ G. V. Eleftheriades
ECE 1228H Electromagnetic Theory/ G. V: Eleftheriades
ECE 1229H Advanced Antenna Theory/ C. D. Sarris
ECE 1236H Microwave and Millimetre-wave Techniques/G. V. Eleftheriades
ECE 1243H Topics in Electromagnetic Waves/ Staff
ECE 1247H Nonlinear Optics/S. Dmitrevsky
ECE 1251H Matter Wave Interaction/ M. Mojahedi
ECE 1252H Introduction to Computational Electrodynamics/C. D. Sarris

Electronics

ECE 512H Analog Filters/D. A. Johns
ECE 530H Analog Electronics/K.W Martin
ECE 534H Integrated Circuit Engineering/ C. A.T: Salama
ECE 1333H Selected Topics in Semiconductor Physics/S. Zukotynski
ECE 1334H Selected Topics in Solid State Electronics/VLSI Technology/ C.A.T Salama
ECE 1336H Semiconductor Physics/ S. Zukotynski
ECE 1352H Analog Circuit Design I/A. S. Sedra, K. W Martin
ECE 1360H Selected Topics in Instrumentation/Staff
ECE 1362H Filter Theory and Design/D. A. Johns
ECE 1364H Selected Topics in Solid State Circuit Design/S. Voinigescu
JEB 1365H Ultrasound: Theory and Applications in Biology and Medicine/ R. S. C. Cobbold
ECE 1371H Advanced Topics in Analog Circuits/K. W Martin
ECE 1373H VLSI Systems Design/P. Chow
ECE 1379H Introduction to Compound Semiconductor Devices/Staff
ECE 1384H Digital Circuit Design/ A. Sheikholeslami
ECE 1385H Selected Topics in VLSI Systems/ F. G. Gulak
ECE 1387H CAD for Digital Circuit Synthesis and Layout/J. S. Rose
ECE 1388H VLSI Design Methodology/C. A. T: Salama
ECE 1390H Selected Topics in Circuits and Systems/Staff
ECE 1391H Advanced Microelectronic Devices/W. T. Ng
ECE 1392H Integrated Circuits for Digital Communications/D. A. Johns
ECE 1393H Semiconductor Devices/W: T. Ng

Biomedical Engineering

JEB 1365H Ultrasound Theory and Applications in Biology and Medicine/ R. S. C. Cobbold
JEB 1375H Practical Optimization/B.L. Bardakjian
JEB 1433H Medical Imaging/M. L. G. Joy
JEB 1444H Neural Engineering/B. L. Bardakjian
JEB 1447H Sensory Communications/ W. Wong
JEB 1451H Cellular Bioelectricity/B. L. Bardakjian
BME 1452H Signal Processing for Bioengineering/S. Davies

Photonics

ECE 527H Photonics I/E. H. Sargenf
ECE 1435H Applied Optics/K. lizuka
ECE 1448H Quantum Mechanics for Engineers/S. Dmitrevsky
ECE 1450H Photonics II/P. W E. Smith
ECE 1460H Special Topics in Photonics/ K. lizuka, E. H. Sargent
ECE 1461H Advanced Laser Processing/P.R. Herman
ECE 1467H Integrated Optical Circuit Design/ J. S. Aitchison
ECE 1468H Electronic and Optical Properties of Quantum Dots/E. H. Sargenf
ECE 1469H Amorphous Semiconductors: Fundamentals and Applications/ N. P. Kherani
ECE 1470H Nanocomposite Materials for Luminescence, Detection, Modulation, and Switching/E. H. Sargenf
ECE 1471H Erbium-doped Fiber Amplifiers: Design and Characterizations/ L. Qian

Communications

ECE 1500H Stochastic Processes/B. Liang
ECE 1501H Error Control Codes/F.R. Kschischang
ECE 1502H Information Theory/W. Yu
ECE 1506H Communications and Signal Processing—Seminar I/Staff
ECE 1507H Communications and Signal Processing—Seminar II/Staff
ECE 1508H Special Topics in Communications/Staff
ECE 1511H Signal Processing/D. Hatzinakos
ECE 1512H Digital Image Processing and Applications/A.N. Venefsanopoulos
ECE 1514H Spectral Analysis and Array Processing/D. Hafzinakos
ECE 1515H Smart Antennas/R. S. Adve
ECE 1516H Visual Data Engineering/K. N. Plafaniotis
ECE 1520H Data Communications I/ S. Pasupathy
ECE 1521H Statistical Communication Theory/S. Pasupathy
ECE 1522H Data Communications II/ S. Pasupathy
ECE 1523H Coded Modulation/F. R. Kschischang
ECE 1528H Special Topics in Data Communications/Staff
ECE 1529H Adaptive Systems for Signal Processing and Communications/K.N. Plataniotis
ECE 1530H Multi-User Detection/T, J, Lim
ECE 1531H Quantum Information Theory/ H.-K. Lo
ECE 1540H Digital Telephony/A. Leon-Garcia, S. G. Zaky
ECE 1541H Communication Networks I/ *S.* Valaee
ECE 1542H Communication Networks II/Staff
ECE 1543H Mobile Communications Systems/ E. *S.* Soma
ECE 1544H Optical Communication Networks/ Staff
ECE 1545H Bridges and Routers/Staff
ECE 1546H Broadband Integrated Networks/ Staff
ECE 1547H Content-Based and Network Security/Staff
ECE 1548H Advanced Network Architectures/ A. Leon-Garcia

Systems Control

ECE 557H Systems Control/Staff
ECE 1617H Large Scale System Theory and Control I/E. J. Davison
ECE 1635H Special Topics in Control I/Staff
ECE 1636H Control of Discrete-Event Systems I/W M. Wonham
ECE 1637H Control of Discrete-Event Systems I/W.M. Wonham
ECE 1639H Analysis and Control of Stochastic Systems I/R. H. Kwong
ECE 1640H Analysis and Control of Stochastic Systems II/R. H. Kwong
ECE 1641H Multivariable Control Design/B. A. Francis
ECE 1643H Special Topics in Control II/Staff
ECE 1644H Large Scale System Theory and Control II/E. J. Davison
ECE 1646H Digital Control/B. A. Francis
ECE 1647H Nonlinear Control System Analysis/M. Maggiore
ECE 1648H Nonlinear Control System Design/ M. Maggiore

ECE 1649H Adaptive Control/Staff
ECE 1651H Adaptive Signal Processing and Control/R. H. Kwong
ECE 1652H Stochastic Processes with Applications/R. H. Kwong
ECE 1653H Hybrid Systems and Control Applications/M. Broucke
ECE 1654H Optical Networks: A Systems Control Perspective/L. Pave/

Computer Engineering

ECE 516H Personal Cybernetics and Intelligent-imaging Systems/ S. Mann
ECE 532H Digital Hardware/Staff
ECE 540H Optimizing Compilers/M. Voss
ECE 1718H Special Topics in Computer Hardware Design/Staff
ECE 1724H Special Topics in Software Engineering/Staff
ECE 1746H Distributed Systems/A. Goel
ECE 1747H Parallel Programming/C. Amza
ECE 1752H Real Time Systems and Software/ M. Stumm
ECE 1754H Compilation Techniques for Parallel Processors/T.S. Abdelrahman
ECE 1755H Parallel Computer Architecture and Programming/Staff
ECE 1756H Digital Hardware Design Using Programmable Logic Devices/ S. Brown
ECE 1759H Advances in Operating Systems/ M. Stumm
ECE 1761H Advanced Topics in Digital Hardware/S. D. Brown
ECE 1762H Algorithms and Data Structured Staff
ECE 1765H File Structures and Storage Systems/Staff
ECE 1767H Design for Test and Testability/ A. Veneris
ECE 1768H Reliability of Integrated Circuits/ F: N. Najm
ECE 1769H Behavioural Synthesis of Digital Integrated Circuits/J. Zhu
ECE 1770H Trends in Middleware Systems-Selected Topics and Concepts/ H.-A. Jacobsen
ECE 1771H Quality-of-Service Provisioning in Mobile Networks/B. Li
ECE 1772H Motion Analysis in Computer Vision/W.J. MacLean
ECE 1773H Advanced Computer Architecture/ Staff
ECE 1774H Sensory Cybernetics/W. Wong
ECE 1775H Microphone Arrays: Theory and Applications/P. Aarabi
ECE 1776H Computer Security, Cryptography and Privacy/D. Lie

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

English ENG

Graduate Faculty

Full Members

A. L. Ackerman, BA, MA, PhD
S. C. Akbari, BA, MA, MPhil, PhD
J. H. Astington, BA, MA, PhD
J. D. Baird, MA, PhD
A. J. Bewell, BA, MA, PhD
R. M. Brown, BA, MA, PhD
J. E. Chamberlin, BA, PhD, FRSC, University Professor
G. E. Clarke, BA, MA, PhD
B. Corman, AB, AM, PhD (Chair)
M. J. A. Cuddy-Keane, BA, MA, PhD
A. H. de Quehen, BA, PhD
P. B. Downes, BA, PhD
D. L. Esch, MA, PhD
G. Fenwick, BA, BEd, MA, PhD
D. I. Galbraith, BA, MA, PhD
M. J. Garson, BA, MA, PhD
M. B. Goldman, BFA, MA, PhD
R. T. Greene, BA, MA, DPhil, PhD
E. D. Harvey, BA, MA, PhD (Director of Graduate Studies)
E. R. Harvey, BA, MPhil, PhD
A. dip. Healey, BA, MA, PhD
G. E. Henderson, BA, MA, PhD
L. A. M. Hutcheon, BA, MA, PhD, University Professor, FRSC
H. J. Jackson, BA, MA, PhD
C. Kanaganayakam, BA, PhD
D. N. Klausner, AB, PhD
A. C. Lancashire, BA, AM, PhD
D. I. Lancashire, BA, MA, PhD
R. G. Landon, BA, BLS, MA
A. M. Leggatt, BA, MA, PhD
G. M. Leonard, BA, MA, PhD
M. J. Levene, BA, MA, PhD
J. L. Levenson, BA, MA, PhD, FRSC
H. Li, BA, PhD
S.-B. MacLean, BA, MA, PhD
L. Magnusson, BA, MA, PhD
J. L. Matus, BA, MA, PhD
R. R. Mcleod, AB, MA, PhD
N. E. Morgenstern, BA, MA, PhD
H. Murray, BA, MA, PhD
S. Neuman, BA, MA, PhD
M. E. Nyquist, BA, MA, PhD
A. P. M. Orchard, BA, MA, PhD
J. W. O. Patrick, BA, MA, PhD
C. E. Percy, BA, MA, DPhil
A. Quayson, BA, PhD
M. F. Redekop, BA, MA, PhD
J. H. Reibetanz, BA, MA, PhD
W. R. Robins. BA. MPhil. PhD
S.Z. Solecki, BA, MA, PhD
P. A. Stevens, BA, MA, PhD, Canada Research Chair
B.C. A. Stock, AB, PhD
R. Sullivan, BA, MA, PhD, Canada Research Chair, FRSC
N. T. Ten Kortenaar, MA, PhD
H. L. Thomson, BA, MA, PhD
D. R. Townsend, BA, MA, PhD
K. A. Weisman, BA, MA, PhD

Members Emeriti

T. H. Adamowski, BA, MA, PhD
P. R. Allen, BA, MA, PhD
F. J. Asals, BA, MA, PhD
H. Auster, BA, MA, PhD
G. E. Bentley (Jr), BA, BLitt, DPhil, DLitt, FRSC
P. Bruckmann, AB, MA, PhD
E. Cameron, BA, MA, PhD
D. D. C. Chambers, MA, PhD
E. Cook, MA, PhD, FRSC
H. B. de Groot, MA, PhD
M. F. N. Dixon, BA, MA, PhD
E. W. Domville, BA, PhD
J. D. Duffy, AB, MA, PhD
J. Dutka, BA, MA, PhD, ARCT
F. T. Flahiff, BA, MA, PhD
R. I. Graziani, BA, MA, PhD
W. H. Halewood, BA, MA, PhD
B. S. Hayne, BA, AM, PhD
W. J. Howard, BA, STB, MA, PhD
J. R. Jackson, BA, AM, MA, PhD, FRSC, University Professor Emeritus
A. F. Johnston, MA, PhD, LLD, DD, FRSC
M. C. Kirkham, BA, MPhil
J. F. Leyerle, BS, BA, MA, PhD
N. Lindheim, BA, MA, PhD
H. R. Maccallum, BA, MA, PhD
J. Macpherson, MA, BLS, PhD
F. J. Marker, AB, DFA
J. Millgate, BA, MA, PhD, FRSC
M. H. Millgate, BA, MA, PhD, FRSC, University Professor Emeritus
L. J. Munk, BA, MA, PhD
R. Parker, BA, MA, PhD
A. G. Rigg, BA, MA, DPhil
A. Saddlemyer, BA, MA, PhD, DLitt, LLD, FRSC
W. D. Shaw, BA, AM, PhD, FRSC
M. Sidnell, BA, MA, PhD
E. P. ViCari, BA, MA, PhD
C. W. Visser, BA, BLitt, PhD
G. Warkentin, BA, MA, PhD

Associate Members

D. Bennett, BA, MA
P. W. M. Blayney, BA, PhD

C. Bolus-Reichert, BPhil, MA, PhD
M. L. Cobb, AM, BA, MA, PhD
C. Columpar, BA, PhD
J. M. DeLombard, BA, MA, PhD
S. E. Dickie, BA, MA, PhD
N. Dolan, BA, PHD
A. Dooley, BA, MA, PhD
A. Dubois
U. Esonwanne, BA, MA, PhD
A. Gillespie, BA,MA.PHD
L. G. Goodison
D. H. Justice, BA, MA, PhD
M. Korey, AB, MS
S. Lamb, BA, MA, PhD
V. P. H. Li, BA, MA, PhD
J. Lopez, BA, MA, PhD
A. Maurice, BA, MA, PhD
A. Most, BA, MA, PhD
N. Mount, BA, MA, PhD
S. J. Ortiz
M. Ruti, BA, DEA, MA, PHD
S. Salih, BA, DPhil
N. Sammond, BA, MA, PhD
H. Schott Syme, BA, AM, PhD
A. Talahite-Moodley, BA, MA, PhD
C. Warky, BA, MA, PhD
D. White, BA, MA, PhD
S. Wilson, BA, MA, MPhil, PhD
M. Woodland, BA, MA, PhD
M. Xie, PhD
T. Yu, AB, PhD

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Application and Admission
Applicants, including those from the University of Toronto, must arrange for recommendations from two referees and must submit a statement of purpose. Admission to all programs for higher degrees will be based upon the candidate's undergraduate and graduate record and upon the evidence of the references and statement. Since it may take several weeks to complete an application file, all candidates wishing to be considered for University of Toronto Fellowships are urged to submit applications well ahead of the December 15 deadline.

Admissions are selective, and possession of minimum qualifications does not guarantee admission.

English Language Proficiency
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 TOEFL and achieve a score of 600 or better. The TOEFL must include the Test of Written English, and applicants must achieve a minimum score of 5.

Degree of Master of Arts
The M.A. program usually requires twelve months to complete for students who are graduates of a four-year program in English or English and another subject at this University, or a similar program elsewhere. Candidates must have a B+ average or better and show evidence of first-class work in English for admission to the M.A. program. In considering applications, the Department favours a broad training in the major genres and all periods of English literary history. Applicants are encouraged to take the Graduate Record Examination and to have a report sent to the Graduate Department.

Candidates may elect to take the degree by course work only or, with permission of the Director, by course work and thesis. In either case, candidates must attain a B standing in each graduate course.

Degree of Master of Arts in the Field of Creative Writing
The M.A. program in English in the Field of Creative Writing usually requires 12 to 15 months to complete for students who are graduates of a four-year major program in English. Applicants must have an overall average of B+ or better and evidence of first-class work in English. The program requires the completion of two full-course equivalents in English, ENG 8000H Biography I, ENG 6950Y Creative Writing, and a supervised Writing Project (the equivalent of a thesis).

All candidates 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 nonfiction. 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.

M.A. by Course Work

For most students, and especially those going on to the Ph.D., this is the preferred option. Candidates are required to earn a credit in Bibliography I and to complete four approved, full graduate courses or the equivalent in English.

M.A. by Thesis

The thesis option may be preferable for some students, especially those not intending to proceed to the Ph.D. It requires Bibliography I, two full graduate courses in English, or the equivalent, and a thesis of approximately 30,000 words on a topic approved by the Department.

Degree of Doctor of Philosophy

Candidates are admitted to the Ph.D. degree program under the General Regulations of the School.

Admission to the Ph.D. program requires either

1 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

2 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 are encouraged to take the Graduate Record Examination and to have a report sent to the Department.

A candidate admitted to the Ph.D. program will 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 Ph.D. program in English within four years, or five years, respectively, most candidates will require at least one additional year to complete all the requirements, including the thesis. The minimum requirements for the degree are as follows:

Course Requirements

A candidate admitted on the basis of a four-year bachelor's degree must take: ENG 8000H Bibliography I, ENG 9500Y Professional Development, ENG 9900H 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 Ph.D. program, the candidate must complete each course taken for graduate credit with a grade of at least B; ENG 8000H and an additional three full-course equivalents in the first year of the program, with an average grade of at least an A-; and the remaining courses by the end of the third year of the program, maintaining an average of at least an A-.

A candidate admitted on the basis of a master's degree must take ENG 8000H Bibliography I, 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 Ph.D. program, the candidate must complete each course taken for graduate credit with a grade of at least a B; and all course work by the end of the second year of the program, maintaining an average of at least an A-.

Every candidate for the Ph.D. 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 courses in the 8000 and 9000 series.)

A candidate's selection of courses must meet the approval of the Department.

English Language Requirement

Every Ph.D. candidate is required to demonstrate knowledge of the history and development of the English language, especially of its early period. Any student who has not already completed English 240Y, or an equivalent full-year undergraduate course in Old English, with at least a B standing is required either to take a course in Old English—English 240Y Old English Language and Literature, English 1001H Old English I, or English 6361H History and Structure of the English Language I-or to pass a special examination in Old English.

Language Requirement

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, a candidate is required to demonstrate a reading knowledge of French. 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 candidate to qualify in other program-related languages as well.

General and Special Examinations

Candidates are required to pass two separate examinations: the General Examination and the Special Field Examination.

The General Examination is designed to give students a broad knowledge of historical periods, works of literature, and critical concepts. It consists of two three-hour written papers covering the whole range of English literature, divided at 1700. A reading list is provided for this examination on the Department Web site, and sample examinations are available in the Department. Students entering the Ph.D. program with a master's degree take both parts of the General Examination in September of their second year. Students entering the program directly from a bachelor's degree take the examination in September of their third year. A January sitting of the examination is designed to accommodate students with special circumstances. Under normal circumstances, students are given two chances to pass the General Examination before termination from the program is recommended. Under certain circumstances, subject to the determination of a particular student's academic standing and progress, the Department may allow a third attempt.

The Special Field Examination consists of a three-hour written examination, followed (approximately two weeks later) by a two-hour oral examination, both based on a reading list related to the candidate's thesis area. This special field reading list is drawn up by the student in consultation with the supervisory committee. Once it receives final approval by the supervisory committee, the approved list is filed by the supervisor with the Associate Director, Ph.D. The Special Field Examination is to be taken approximately three months after the list is approved. Students are advised to consult the departmental guides on Special Field reading lists. Candidates should submit a reading list by the end of January of the second year for students admitted from the master's degree, by the end of January of the third year for students admitted from a bachelor's degree, and pass the exam by the end of the subsequent April. On the recommendation of the examining committee, a second attempt is allowed.

The candidate 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 Ph.D. thesis is approximately 75,000 words. The maximum length accepted by the Department is 100,000 words).

No later than November 1 of the second year of registration in the case of a student admitted on the basis of a master's degree; otherwise, by November 1 of the third year of registration, the candidate must submit to the Associate Director, Ph.D. an outline of the proposed research for the thesis, approved by the prospective Supervisor. The proposals are circulated to all graduate faculty in the Department for information and comment. Once the graduate committee approves the proposal, the Associate Director, Ph.D. appoints a supervisory committee that includes a Supervisor and two other faculty members with expertise in the proposed research area. The candidate and the supervisor should meet regularly. The candidate is also required to meet at least once a year with the two other members of the supervisory committee. The supervisory committee should normally approve the completed thesis before it is submitted for examination. The final oral examination is arranged by the Department in collaboration with the School of Graduate Studies. The candidate should allow at least eight weeks from submission of the thesis in order for the Department to complete the arrangements for the oral examination.

Collaborative Programs

The Department of English participates in the following collaborative programs:

1 Book History and Print Culture (M.A., Ph.D.)
2 Editing Medieval Texts (Ph.D.)
3 Health Care, Technology and Place (Ph.D.)
4 Jewish Studies (Ph.D.)
5 South Asian Studies (M.A., Ph.D.)
6 Women's Studies (M.A., Ph.D.)

For details about each collaborative program, consult the separate entries in this calendar.

Cross-Listed Courses

Students in English are eligible to take courses in other graduate units (e.g., Comparative Literature, Medieval Studies, Drama, Museum Studies, South Asian Studies, Women's Studies).

Courses of Instruction

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.

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 Ph.D. program. With the special approval of the Director of Graduate Studies, candidates for the Ph.D. may substitute one such course for one (and not more than one) of the required courses.

ENG 1001H Old English II//D. R. Townsend
ENG 1002H Old English III/A. D. Healey
ENG 1013H Women in Medieval Literature: Image and Author/S. C. Akbari
ENG 1083H Anglo-Saxon Poetry/ A. P. M. Orchard
ENG 1093H The Medieval Vernacular Book/ A. Gillespie
ENG 2015H Printing and Publishing in Tudor London/P. W. M. Blayney
ENG 2150Y The Meditative Tradition in Western Literature and Art/ B.C. A. Stock
ENG 2423H The Faerie Queene/ D. I. Galbraith
ENG 2463H Rhetoric of Early Modern Colonalism/P. Stevens
ENG 2523H The Morality Play/D. N. Klausner
ENG 2533H Historicizing Shakespeare's Language: Social Discourse and Cultural Production/ L. Magnusson
ENG 2653H Renaissance Tragedy/ H. L. Thomson
ENG 2683H An Introduction to History in Shakespeare's Theatre/ J. L. Levenson
ENG 3043H Drama 1660–1710/B. C. Corman
ENG 3303H "Henry Fielding"/S. Dickie
ENG 4403H The Victorian "Unconscious"/ J. L. Matus
ENG 4668H Romanticism and Empire/ D. E. White
ENG 4753H The Victorians and France/ C. Bolus-Reichert
ENG 4998H Writing the Early American Self/ J. M. De Lombard
ENG 5023H Elegy, the Elegiac and the Judaic in Twentieth Century Anglo-American Poetry/K. A. Weisman
ENG 5048H "Raciness": Race and Sexuality in American Politics, Literature, and Criticism/M. Cobb
ENG 5049H Liberalism, Its Critics, and Literature/ N. Dolan
ENG 5058H Magical Realism(s): Postcolonialism and Postmodernism/A. Quayson
ENG 5063H Reading Twentieth-Century American Drama/ A. L. Ackerman
ENG 5278H Popular American Lyric/ A. DuBois
ENG 5658H Virginia Woolf: Essays and Short Fiction/M. J. A. Cuddy-Keane
ENG 5793H Theories of Modernist Canadian Fiction/C, Hill
ENG 5807H Sri Lankan Literature/ C. Kanaganayakam
ENG 5893H Literature and the Environment/ M. J. Levene
ENG 5905H African-Canadian Literature/ G. E. Clarke
ENG 5998H Theorizing Asian North American Studies: Globalization and Nation/T. P. Yu
ENG 6003H Literary History and Identity Politics/L. A. M. Hufcheon
ENG 6038H Authors and Their Institutions/H. Murray
ENG 6057H Psychoanalysis and Race/ U. Esonwanne
ENG 6058H Freud, Nietzsche, and the Subject of Desire/M. Ruti
ENG 6153H Literature and Culture of the Urban Crisis/S. Wilson
ENG 6163H The Fate of Culture in an Age of Globalization/V. P. H. Li
ENG 6183H Getting into Print: Case Studies in Publishing 1800-1960/ G. Fenwick
ENG 6208H Authenticity, Appropriation, Subjectivity: Modes of Translatabilityl M. Xie
ENG 6362H History and Structure of the English Language II/C. E. Percy
ENG 6528H The Mulatto/S. Salih
ENG 6813H The Textuality of the Body/ C. Columpar
ENG 6950Y Creative Writing
ENG 8000H Bibliography I (Credit/No Credit)/ Staff
ENG 9500Y Professional Development (Credit/No Credit)/Staff
ENG 9900H Professing Literature (Credit/No Credit)/Staff

Environmental Engineering (Collaborative Program)

Program Committee

D. W. Kirk, BASc, MASc, PhD, PEng/Chemical Engineering & Applied Chemistry
P. H. Byer, SB, SM, PhD, PEng/Civil Engineering (Director)
B. W. Karney, BASc, MEng, PhD, PEng/Civil Engineering
T. A. Utigard, BSc, MASc, PhD, PEng/Materials Science & Engineering
P. E. Sullivan, BSME, MSME, PhD/Mechanical & Industrial Engineering

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Web: www.ecf.utoronto.ca/apsc/enveng

The Environmental Engineering Collaborative Program (EECP) is an interdisciplinary collaborative program designed for students interested in taking a concentration of courses and doing research in environmental engineering. It is open to M.A.Sc., M.Eng., and Ph.D. students in the following collaborating graduate departments in the Faculty of Applied Science and Engineering:

1 Chemical Engineering and Applied Chemistry
2 Civil Engineering
3 Materials Science and Engineering
4 Mechanical and industrial 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 in conjunction with the participating departments and the Institute for Environmental Studies.

Candidates 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 register in the EECP, students must first apply to and be accepted into a master's or 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 are available from the Division or any of the collaborating departments.

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 Institute for Environmental Studies. See the calendar entries for the collaborating departments and the Institute for Environmental Studies for lists of courses. More detailed information on faculty, areas of research, and courses is available from the Division, and on the Division's Web site.

Program Requirements

The EECP requirements are:

1 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.

2 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.

3 Participation in EDE 3000H, the Environmental Engineering Research Seminar Series, for at least two sessions. This is mandatory for M.A.Sc. and Ph.D. students and recommended for M.Eng. students.

Students who complete these EECP requirements will obtain the following statement on their transcript: "Completed Collaborative Program in Environmental Engineering".

Environmental Studies IES

Graduate Faculty

Full Members

J. P. D. Abbatt, BSc, AM, PhD
B. J. Adams, BSc, MS, PhD, PEng
R. C. Andrews, BASc, MSc, PhD, PEng
D. M. Bagley, BS, MS, PhD, PEng
S.C. H. Barrett, BSc, PhD, Canada Research Chair
T. J. Blake, BScF, STB, MF, PhD, DipFor
R. 6. Bryan, BA, PhD
M. F. Bunce, BA, PhD
F. D. Burton, BSc, MA, PhD
P. ti. Byer, SB, SM, PhD, PEng
T. J. Carleton, BSc, MSC, PhD
C. G. Chalin Clark, BSN,MA,PhD,MDiv
J. M. Chen, BSc, PhD
D. Cole, BSc, MD, MSc
P. A. Cooper, BScF, MSc, BEd, PhD
P. N. Corey, BSc, MA, PhD
F. Csillag, MSc, PhD
H. Cyr, BSc, MSc, PhD
A. Daniere, MPP, PhD, MCIP
A. M. Davis, BA, MA, PhD
G. Dei, BA, MA, PhD
D. N. Dewees, BSc, LLB, BScEE, PhD
M. L. Diamond, MSC, PhD
J. E. Eckenwalder, BA, PhD
M. E. Eichler, MA, LLD, PhD
M. D. Engstrom, BS, MS, PhD
G. Evans, BASc, MASc, PhD, PEng
N. Eyles, BSc, MSc, PhD
R. R. Fulthorpe, BSc, MSc, PhD
W. A. Gough, BSc, MSc, PhD
B. Greenwood, BSc, PhD, Hon Causa
P. Harper, BSc MSC, PhD
L. D. Harvey, BSc, MSc, PhD
D. L. Holness, MHSc, MD
T. F. Homer-Dixon, BA, PhD
S. E. Horton, BA, MA, PhD
K. W. Howard, BSc, MSc, PhD
R. Jaakson, BA, MSc, PhD, MCIP
S. Kant, BE, MA, PhD
B. W. Karney, BASc, MEng, PhD, PEng
C. A. Kennedy, BEng, DiplEcon, DIC, MASc, PhD, PEng
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S. M. Mabury, BS, PhD
L. S. MacDowell, BA, MSc, PhD
V. W. Maclaren, BA, MRP, MSc, PhD, MCIP
H. L. MacLean, BEng, MBA, MSc, PhD, PEng
J. Malcolm, BSc, MSc, PhD
D. L. Martell, BASc, MASc, PhD
P. McCarney, BA, MCP, PhD
A. D. Miall, BSc, PhD, DSc, Hon Causa, FRSC
W. Michelson, AB, AM, PhD, FRSC
G. W. K. Moore, BSc, PhD
D. S. Munro, BSc, MSc, PhD
E. O'Sullivan
A. G. Price, BSc, MSc, PhD
J. T. Purdham, BSc, PhD
F. H. Rodd, BSc, MSc, PhD
R. F. Sage, BA, MS, PhD
M. Sain, BSc, BASc, MTech, PhD, PEng
K. R. Sandbrook, BA, MA, DPhil, FRSC
A. M. Sass-Kortsak, BSc, MHSc, PhD
L. A. Sawchuk, BA, MA, PhD
B. Sherwood Lollar, BA, PhD
K. Sieciechowicz, BA, MA, PhD
F. S. Silverman, BSc, MSc, PhD
M. Simpson, BS, PhD
G. D. Skogstad, BA, MA, PhD
S. M. Smith, BSc, MSc, PhD
W. G. Sprules, BSc, MA, PhD
I. L. Stefanovic, BA, MA, PhD
R. E. Stren, BA, MA, PhD
S. M. Tarlo, MBBS, MRCP, FRCP(C)
V. R. Timmer, BScF, MScF, PhD
W. H. Vanderburg, BASc, MASc, PhD, PEng
F. Wania, Dipl-Geook, PhD
R. R. White, BA, MSc, PhD
D. D. Williams, BSc, MSc, PhD, DSc
A. P. Zimmerman, BA, PhD

Members Emeriti

P. L. Aird, BScAgr, MS, PhD
R. I. C. Hansell, BSc PhD
D. Mackay, BSc, PhD, FCIC, PEng
R. E. Munn, BA, MA, PhD
D. M. Nowlan, BA, BSc, MA, PhD
H. A. Regier, PhD
D. N. Roy, BSc, MSc, DPhil, FRSC
J. B. Whitney, PhD, MCIP
G. R. Williams, BSc, Dr Science

Associate Members

B. Bass, BA, MSc, PhD
A. Boland, BA, MAIS, PhD
Q. Chiotti, BA;MA;PhD
J. E. Dooley, BASc, MASc, PhD
D. Etkin, Bsc., BEd., MSc.
A. P. Grima, EA, MA, PhD
H. R. Hosein, BSc MSC, PhD
W. A. Kenney, Bsc, MSc, PhD
S. Labatt, BA, MA, PhD
D. Macdonald, BA, MA, PhD
M. Mirza, BSE, MScEng, PhD
P. Muldoon, BA, LLB, MA, LLM
B. Murck, BA, PhD
W. Prudham. BArtSc. MA. PhD

J. Rigby, BA; MBA
P. Robinson
S. E. Salbach, BASc, MASc, PEng
I.. Savan, BSc, PhD, MCIP
S. Scharper, BA, MA, PhD -
M. R. Shimizu, BA, MA
L. F. Smith, MD
P. Telford, BSc PhD
P. C. Timmerman, BA, MA
S. Wakefield, BA, MA, PhD.
D. M. Whelpdale, BSc, MSc, PhD
M. Whittaker, BSc, MBA, MSc, PhD
K. Wilson, BA,MA,PhD
M. Winfield, EA; MA; PhD
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INTRODUCTION
The Institute for Environmental Studies (IES) 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.

Collaborative Programs
The Institute for Environmental Studies offers the following collaborative programs:
1 Environmental Studies
2 Environment and Health

The Division of Environmental Engineering offers a collaborative graduate program in Environmental Engineering. For more information, see the separate entry in this calendar.

Prospective students should apply concurrently to a home department and to IES. Students planning to begin the program in September should register with the Institute by August 1 ; students planning to start the program in January should register with the Institute by December 1.

A detailed calendar, ***Graduate Studies in the Environment,*** is available at www.utoronto.ca/env/ies.

Admission Requirements
Admission is subject to the approval of the graduate home department in consultation with the Institute for Environmental Studies. Applicants should apply concurrently, but candidates must be first admitted to a home department before being admitted to IES.

ENVIRONMENTAL STUDIES (COLLABORATIVE PROGRAM)

The graduate units of Adult Education and Counselling Psychology; Anthropology; Botany; Chemistry; Economics; Forestry; Geography; Geology; Information Studies; Management; Philosophy; Political Science; Sociology; Sociology and Equity Studies; and Zoology, in conjunction with the Institute for Environmental Studies, offer collaborative graduate programs in Environmental Studies. Discussions regarding collaboration with other departments are in progress.

Departments participating in the program contribute graduate courses and provide supervision for graduate research.

Candidates 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 in graduate departments not listed above who are interested in the Environmental Studies Collaborative Program should speak to the IES Student Advisor and to their home department's Graduate Coordinator/Graduate Studies Administrator/Chair to discuss this possibility.

Students may pursue an M.A., M.Sc., M.I.St., M.B.A., M.Ed., M.F.C., M.Sc.F., or Ph.D. degree.

Typically, environmental students undertaking a master's degree are required to complete three IES half-courses (two of which are core courses) and a thesis; for non-thesis master's students, a major research paper and an internship are required. These requirements may be completed in addition to, or as part of, the master's program in their department. Environmental students undertaking a doctoral degree are required to complete the two IES core courses plus a thesis in the home department. The doctoral or master's thesis - or major research paper for non-thesis master's students - must include an environmental theme. Degree requirements vary from department to department; therefore, at the time of the applicant's admis-

sion, close consultation between the Institute and the proposed home department is required to determine a suitable collaborative arrangement.

Program Requirements

1 Details of course requirements are available in the Graduate Studies in the Environment calendar (www.utoronto.ca/env/ies). Please note that these courses may be used to satisfy the elective requirements of the home department.

2 Further degree requirements may be determined by the department and/or by the student's supervisor or supervisory committee. These requirements will depend on the background and academic and/or career goals of the student, as well as departmental regulations.

3 An environmentally-related research thesis or major research paper and an internship are normally required. A copy of the final thesis or research paper is submitted to IES.

4 A supervisor or supervisory committee may be appointed for each student by the home department and IES.

Graduation Requirements

The Institute for Environmental Studies recommends to the home department and the School of Graduate Studies that a candidate should graduate following completion of the above program requirements. Students receive, in addition to the master's or Ph.D. degree in their departmental area, the notation "Completed Collaborative Program in Environmental Studies" on their transcript.

Courses of Instruction

The Institute offers individual credit courses that are open to graduate students from all parts of the University, subject to enrolment limits.

In addition to the Institute's courses listed below, other courses dealing with environmental topics are offered as part of the regular teaching programs in departments. See the Institute's calendar at www.utoronto.ca/env/ies for further details.

Core Courses

IES 1001H Environmental Decision Making
IES 1002H Environmental Management Case Studies

Contaminants in the Environment

IES 1410H Analytical Environmental Chemistry
IES 2501H Pollution Prevention and Control
JGN 2607H Advanced Techniques in Hydrogeology
JNC 2503H Environmental Pathways

Ecology

JBE 1434H Applied Ecology
JGE 1420H Urban Waste Management

Environment and Health

IES 4001Y+ Graduate Seminar in Environment and Health
CHL 5416H Environmental Epidemiology
CHL 5903H Environmental Health
MSC 4000H Seminars in Environment and Health

Environmental Education

AEC 1178H Practitioner/Ecological Identity and Reflexive Inquiry
AEC 3176H Sense of Place in Professional and Natural Contexts

Environmental Management

IES 1701H Environmental Law
IES 1703H Water Resources Management
IES 1704H Environmental Risk Analysis and Management
IES 1705H Corporate Perspectives on the Environment
IES 1706H Natural Hazards and Natural Disasters
IES 1707H Environmental Finance: Risk Management and Business Opportunities
JEI 1901H Technology, Society, and the Environment I
JEI 1902H Technology, Society, and the Environment II
JPV 1201H Politics, Bureaucracy, and the Environment

Environmental Philosophy

JVP 2147H Environmental Philosophy
RLG 2019H Religion and the Environment

Global Change/International Environmental Issues

IES 1433H Regional Resource Ecology
JGE 1430H Political Economy of Forest Conservation

History

HIS 1111H Topics in North American Environmental History

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

Individual Study

IES 2000H,Y Topics in Environmental Studies
IES 2001H Special Topics—Environmental Studies
IES 2002H Special Topics—Environmental Studies
IES 4444Y+ Internship
IES 5555Y+ Research Paper

ENVIRONMENT AND HEALTH (COLLABORATIVE PROGRAM)

Program Committee

F. S. Silverman, BSc, MSc, PhD/Environmental Studies (Director)
I. L. Stefanovic, BA, MA, PhD/Environmental Studies
A. P. Zimmerman, BA, PhD/Environmental Studies
M. L. Diamond, MSc, PhD/Geography
V. W. Maclaren, BA, MRP, MSc, PhD, MCIP/Geography
R. R. White, BA, MSc, PhD/Geography
D. Cole, BSc, MD, MSc/Public Health Sciences
J. T. Purdham, BSc, PhD/Public Health Sciences
L. F. Smith, MD/Public Health Sciences

The graduate units of Geography, Medical Science, and Public Health Sciences, in conjunction with the Institute for Environmental Studies, offer a collaborative program in Environment and Health. Candidates 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 pursue a master's or Ph.D. degree according to home unit regulations.

Graduate students who are interested in taking a collaborative program in environment and health, but who are from units not listed above, should speak to the IES Student Advisor and to their home unit's graduate advisor(s).

Program Requirements

1 Master's students must complete the core course, MSC 4000H *Seminars in Environment and Health,* which is normally offered in the Winter Session.
2 For degrees which require a thesis or research project, the topic should be within the field of environment and health, as approved by the home department and the Collaborative Program Committee. A copy of the final thesis or project must be submitted to IES.
3 Further degree requirements may be determined by the graduate unit and/or by the student's supervisor or supervisory committee. These requirements will depend on the background of the student, as well as on the unit's regulations.
4 Ph.D. students must complete the year-long core course IES 4001Y+ *Graduate Seminar in Environment and Health* as a credit/non-credit course and will present a seminar on their thesis topic. The doctoral thesis will focus on a theme in environment and health, and the committee membership will include a supervisor from the student's home department who is a member of the Environment and Health Program and at least one other member from a collaborating graduate unit.

Graduation Requirements

The Institute for Environmental Studies recommends to the home department and the School of Graduate Studies that a candidate should graduate following completion of the above requirements. In addition to the master's or Ph.D. degree in their unit area, students receive the notation "Completed Collaborative Program in Environment and Health on their transcript.

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

ENVIRONMENTAL SCIENCES

Graduate Faculty

Full Members

N. Eyles, BSc, MSc, PhD
R. R. Fulthorpe, BSc MSC, PhD
B. Greenwood, BSc, PhD, Hon Causa
W. A. Gough, BSc, MSc, PhD
K. W. Howard, BSc, MSc, PhD
A. G. Price, BSc, MSc, PhD
M. Simpson, BS, PhD
F. Wania, DipI-Geoak, PhD
R. R. White, BA, MSc, PhD
D. D. Williams, BSc MSc, PhD, DSc

Degree of Master of Environmental Science

At press time, the Master of Environmental Science degree program was pending final approval. Please consult the graduate unit for details.

A 12-month professional course work Master of Environmental Science (M.Env.Sc.) degree program is offered at the Scarborough Campus of the University of Toronto. The focus of the program relates to contaminants and their transport and fate in natural and degraded environments. It 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 received is also designed to allow and encourage students to pursue further advanced degrees within this University or elsewhere.

Students will be expected to satisfy all other requirements for entry into the graduate school at this University within a competitive selection process. This process will be administered by the Program Committee. Students entering the M.Env.Sc program will be expected to have a 4-year University of Toronto specialist bachelor's degree, or equivalent, either in Environmental Science or a closely related science or engineering discipline with a minimum mid-B grade average in the last two years of the undergraduate program. Candidates will submit a written statement explaining their objectives in wishing to enter 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. If admitted, those candidates lacking essential background preparation in one or more areas of study, may be required to complete additional undergraduate courses in addition to the regular program requirements. This will be determined on a case-by-case basis.

The M.Env.Sc. Program has two streams consisting of either an *all-course option,* or an *intern option* both requiring completion of five full-course equivalents FCEs. It is anticipated that students will complete all instructional courses in two sessions and will complete field and research-focused courses during the summer. Part time study is also possible. Supplementary courses offered within the Institute for Environmental Studies and other departments in the sciences and engineering can be used as electives with the permission of the departments and Program Director.

Ethnic and Pluralism Studies (Collaborative Program)

Program Committee

M. D. Levin, BA, MA, PhD/Anthropology
W. M. Baker, BCom, MA, PhD, Royal Bank Chair in Public and Economic Policy/Economics
S. Ruddick, BES, MA, PhD, MCIP/Geography
H. M. Troper, BA, MA, PhD/History
N. Weiner, BSB, MA, PhD/Industrial Relations and Human Resources
M. P. Macklem, BA, LLB, LLM/Law
N. Khanlou, RN, BScN, MSc, PhD/Nursing Science
P. H. Solomon, BA, MA, CertRusslnst, PhD/Political Science
H. D. Forbes, BA, MA, PhD/Political Science
P. Klassen, BA, MA, MPhil, PhD/Religion
J. Sudbury, BA, MA, Ph.D, CRC Chair in Social Justice, Equity & Diversity/Social Work
J. G. Reitz, BS, PhD, FRSC, Robert F. Harney Professor of Ethnic Immigration and Pluralism Studies/Sociology (Director)
E. Fong, BA, MA, PhD/Sociology

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E-mail: ethnic.studies@utoronto.ca
Web: www.utoronto.ca/ethnicstudies

The graduate units of Anthropology, Geography, History, Industrial Relations and Human Resources, Nursing Science, Political Science, Religion, Russian and East European Studies, Social Work, and Sociology 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.

Candidates 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. Students must follow a program of studies acceptable to both the participating graduate unit and the Ethnic and Pluralism Studies Program. 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.

General Requirements

Candidates for the degrees of Master of Arts, Master of Industrial Relations and Human Resources, Master of Nursing, Master of Science, Master of Social Work, and Doctor of Philosophy are accepted by the participating graduate unit under the general regulations. Collaborative program requirements may be met concurrent with, or in addition to, departmental requirements. Students should consult specific departmental listings for information.

Degree of Master of Arts, Master of Industrial Relations and Human Resources, Master of Nursing, Master of Science, or Master of Social Work

Program Requirements

1 Two half-courses in ethnicity, at least one of which 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.
2 A coordinating seminar in ethnicity. The seminar, which is a half-course, will be 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.
3 When a practicum is required, it will focus on ethnicity.
4 It is understood that the major paper or thesis as required by the graduate unit would be in an ethnic studies area.

Degree of Doctor of Philosophy

Program Requirements

1 Four half-courses, or equivalent, in ethnicity, including master's-level courses, at least two of which 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.
2 A coordinating seminar in ethnicity. The seminar, which is a half-course, will be 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.
3 When the student's graduate unit requires more than one comprehensive examination, one of the examinations will be in ethnicity.
4 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.
5 A Ph.D. thesis will focus on ethnicity. The supervisor of the thesis committee will be a specialist in the area of ethnicity.

Courses of Instruction
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/J. G. Reitz

Anthropology
ANT 6003H Critical Issues in Ethnography I/ Staff
ANT 6004H Critical issues in Ethnography Ill Staff
ANT 6034H Advanced Research Seminar IV (Ethnicity)/M. D. Levin
ANT 6040H Approaches to Field Work I/ R. Lee
ANT 6041H Approaches to Field Work II/Staff
ANT 6050H Reading Course in Specific Area and Theory I/Staff

Economics
ECO 2800H *Labour Economics I/M. Baker*
Prerequisite: an undergraduate course in statistics and a graduate course in applied statistics.

Geography
PLA 1503H Planning and Social Policy/ S. Ruddick
JPG 1506H State/Space/Difference: Understanding the New Social Geography/S. Ruddick
GGR 1712H Historical Geography of Ethnic Groups in Canada/D. A. McQuillan

History
HIS 1102H Spiritual Invasion: Natives of the Americas Confront Christianity/ A. Greer
HIS 1120H Topics in Aboriginal/Non-Aboriginal Relations in Canada/Staff
HIS 1164H Irish Migration to Canada: Sources and Methods/ M. McGowan
HIS 1166H Immigrants, Minorities, and the Racialized Other: Canada in a Comparative Context/ F: lacovetta
Prerequisite: any previous course in the history of Canada.
HIS 1274H The Nazis, Occupied Europe, and the Jews/M. R. Marrus
HIS 1287H Polish Jews Since the Partitions of Poland (joint graduatehndergraduate)/P. Wróbell
HIS 1297H Problems of National Survival in Eastern Europe Since 1848/ A. Rossos
HIS 1528H Crossing Boundaries: Race, Ethnicity, Class, and Gender in America, 1880-1930/Staff
HIS 1545H Race, Segregation and Protest: South Africa and the United Stated/R. Halpern

Industrial Relations and Human Resources
IRE 3630H Diversity and Inclusiveness in the Workplace/N. Weiner

Law
LAW 259H Comparative Indigenous Rights/ J. Borrows
LAW 262H Citizenship Theory and Immigration Law/A. Shachar
LAW 294H International Human Rights Law/ M. P. Macklem
LAW 368H Race and the Law/K. Rittich
LAW 370H Aboriginal Peoples and the Law/ K. Wilkins
LAW 410H Discrimination Law: Equality in the Private Sector/D. Reaume

Nursing Science
NUR 1013H Transcultural Health Care Issues/ Staff
NUR 1014H Politics of Aboriginal Health/R. S. Hagey
NUR 1068H Youth and Mental Health Promotion/N. Khanlou

Political Science
POL 2001Y Problems of Political Community/ J. H. Carens
POL 2038Y Problems of Pluralism and Equality/M. S. Williams
POL 2127H Canadian Theories of Multiculturalism/H. D. Forbes

POL 2324H Ethnonationalism and State-Building: The Communist and Post-Communist Experience/D. Schwartz
POL 2413Y Politics, Culture, and Identity in Southeast Asia/J. Bertrand

Religion
RLG 2037H Religion and Healing/P. Klassen
RLG 3931H Topics in North American Religions/P. Klassen

Social Work
SWK 4210H Promoting Empowerment: Working at the Margins/I. Sakarnoto
SWK 4617H Cross-Cultural Social Work Practice/A. K. T: Tsang, K. Richard
SWK 4658H Social Work with Immigrants and Refugees/U. George
SWK 4801H Special Studies: Women of Colour, Aboriginal Women, and Social Change/J. Sudbury

Sociology
SOC 6002H Immigration I: Contemporary International Migration/J. G. Reitz
SOC 6003H Immigration II: Sociology of Immigration, Ethnicity and Employment/J, G. Reitz
SOC 6009H Ethnicity I/Staff
SOC 6016H Social Demography I/Staff
SOC 6109H Ethnicity II/J. G. Reitz
SOC 6116H Social Demography II/E. Fong

Theory and Policy Studies in Education
TPS 1428H Immigration and the History of Canadian Education/H.M. *Troper*
TPS 1429H Ethnicity and the History of Canadian Education/H. M. *Troper*
TPS 3428H Minority Concerns and Education in Canadian History: Selected Topics/H. M. Troper

Exercise Sciences EXS

Graduate Faculty

Full Members

K. R. Allison, BSc, BPHE, MASc, MSc, PhD
F. J. R. Buick, BSc, MSc, PhD
K. R. Chapman, FRCPC, MSc, FACP, PhD
P. N. Corey, BSc, MA, PhD
M. J. DeSouza, BSc, MSc, PhD
P. A. Donnelly, EA, MS, PhD
M. Ducharme, BSc, MSc, PhD
J. Frim, BSc, MSc, PhD
R. C. Goode, BPhE, BA, MA, DPhil
J. M. Goodman, BPHE, MSc, PhD
L. Goodman, BPHE, MPE, PhD
B. H. Gottlieb, BA, MSW, PhD
L. Hamm, BA, MA, PhD
R. J. Heslegrave, BSc, MA, PhD
I. Jacobs, DipPE, MHK, DMedSci
T. Kavanagh, LRCP, MRCS, FRCP, DPhysMed
G. A. Kerr, BPHE, MA, PhD
B. Kidd, BA, AM, MA, PhD
L. Leith, BA, MA, PhD
H. I. Lenskyj, BA, MA, PhD
M. Locke, BA, BSc, PhD
M. MacNeill, BPHe, MA, PhD
L. M. Mainwaring, BA, BHK, MHK, PhD, CPsych
N. McKee, MD, FRCS(C)
T. Mclellan, BSc, BA, BEd, MA, PhD
M. J. Plyley, BSc, PhD
C. D. Rodgers, BPE, MHK, PhD
P. N. Shek, BSc, MSc, PhD
F. S. Silverman, BSc, MSc, PhD
S. G. Thomas, BSc, MSc, PhD
(Associate Dean, Graduate Studies)
P. F. Tikuisis, BSc, MSc, PhD

Members Emeriti

M. W. Radomski, BSc, MSc, PhD
R. J. Shephard, BSc.MD, PhD

Associate Members

P. Comper, PhD, CPsych
J. Dwyer, BA, BEd, MA, PhD
G. E. J. Faulkner, BSc, MSc, PhD
C. FUSCO, BA, CertED, MSc, PhD
C. E. James, BA, MA, PhD
P. Klentrou, BSc MSc, PhD
K. L. Lockwood, BPHE, MSc, PhD
J. Maguire, BEd, PhD
B. G. Pronger, BA, MSc, PhD
G. R. Rail, BA, MSc, PhD
L. Tremblay, BSc, MSc, PhD
J. L. Van Heest, BA, MSc, PhD
B. W. Wilson, BPE, MA, PhD

Address:
Graduate Department of Exercise Sciences
Faculty of Physical Education and Health
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The Graduate Department of Exercise Sciences (kinesiology) offers Master of Science and Doctor of Philosophy programs for students interested in research, academic, and professional careers relating to:
Applied/exercise/environmental physiology
Metabolic and endocrinological aspects of physical activity
Muscle physiology
Physical fitness
Psychological aspects of sport and physical activity
Psychophysiological aspects of exercise and stress
Sociocultural aspects of sport and physical activity

Students are admitted to the interdisciplinary field of exercise sciences under the general regulations of the School of Graduate Studies. More specific program details, requirements, course descriptions, and a supplementary application form are available from the Graduate Department of Exercise Sciences. Applications must be submitted by February 1.

Degree of Master of Science

Admission Requirements

Candidates should have a four-year degree, or its equivalent, in physical education and health or a related discipline from a recognized university.

Program Requirements

1 The completion of all degree requirements within five years of first registration in the program.
2 The successful completion of five half-courses, including one of EXS 5503H, EXS 5516H, or EXS 5518H; at least one other half-course from the Exercise Sciences offerings; and one half-course in an appropriate methodology. All courses must be approved in advance by the student's supervisor and the Graduate Department of Exercise Sciences.

3 The writing of a thesis under the supervision of a thesis committee (supervisor and at least two additional faculty members) and its defence before an examination committee appointed by the Graduate Department of Exercise Sciences.
4 Part-time study is available. The student's annual program plan must be approved by the supervisor and the Graduate Department of Exercise Sciences.

Degree of Doctor of Philosophy

Admission Requirements
Candidates applying to the Ph.D. program normally will be expected to have completed a M.A. or M.Sc. with a thesis in a related field and provide satisfactory references pertaining to their academic and research abilities.

Program Requirements for Full-time Ph. D.
1 Full-time registration (fall, spring, summer sessions) for the first four years of the doctoral program.
2 Completion of all degree requirements within six years from first registration in the program. Thereafter, candidates may apply for a maximum of two extensions.
3 The successful completion of six half-courses, including one of EXS 5503H, EXS 5516H, or EXS 5518H; at least two other half-courses from the Exercise Sciences offerings; and one half-course in an appropriate methodology. All courses must be approved in advance by the student's supervisor and the Graduate Department of Exercise Sciences.
4 The successful completion of a comprehensive examination.
5 The 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.
6 The oral defence of the thesis before an examination committee appointed by the School of Graduate Studies.

Program Requirements for Flexible-time Ph.D.
With the approval of the Associate Dean, Graduate Education and Research, some applicants may be admitted to a flexible-time Ph.D. program. This program will benefit mature students with career and/or familial obligations. The degree requirements for the flexible-time program are identical to those listed above for the full-time Ph.D. program; however, students have up to eight years to complete the program. They are required to register full-time for the first four years of their 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.

Collaborative Programs
Exercise Sciences participates in the following collaborative programs:
1 Aging and the Life Course
2 Cardiovascular Sciences
3 Women's Studies
For details, consult the separate entries in this calendar .

Courses of Instruction

EXS 5503H Adaptations to Habitual Activity/ S. Thomas
EXS 5506H Metabolism and Endocrine Function in Exercise/Staff
EXS 5508H Cardiovascular Disease and Exercise/J. M. Goodman
EXS 5509H Applied Muscle Physiology and Biochemistry/M. Locke
EXS 5510H Respiratory Control and Mechanics During Exercise and in Special Environments/R. C. Goode, S. G. Thomas
EXS 5516H Exercise Psychology/L. M. Leith
EXS 5517H Public Policy and Physical Activity in Canada/B. Kidd
EXS 5518H Theoretical Issues in the Sociocultural Study of Physical Activity and Health/P. A. Donnelly
EXS 5519H Theories of the Body and Transcendence/B. Pronger
EXS 5520H Positive Psychology: Psychosocial Factors in Optimal Health and Wellness/L. M. Mainwaring
EXS 5521H Stress and Coping/G. A. Kerr
EXS 7001H Directed Reading in Exercise Sciences
EXS 7002H Approved Research Project in Exercise Sciences
JXP 5807H Health Communications/M. E. MacNeill, L. Hershfield
SES 1985H Women's Learning, Women's Health Movements, and the Health Professions/H. Lenskyi
SES 2999H Special Topics in Sociological Research in Education: Diversity and Social Justice Issues in Physical Education, Recreation and Sports/H. Lenskyi

Financial Economics

Graduate Faculty

Full Members

V. A. Aivazian, BS, MA, PhD/Economics (Director)
G. J. Anderson, BA, MSc, PhD/Economics
L. D. Booth, BSc, MA, MBA, DBA/Management
D. J. Brean, BA, BBA, MBA, MSc, PhD/Management
J. L. Carr, BCom MA, PhD/Economics
P. J. Halpern, BCom, MBA, PhD/Management
J. C. Hull, BA, MA, MA, PhD/Management
G. V. Jump, BA, PhD/Economics
T. H. McCurdy, BA, MA, PhD/Management
A. Melino, BA, PhD/Economics
P. H. Pauly, MA, PhD/Management
J. E. Pesando, BA, MA, PhD/Economics
J. K. Roberts, BA, MA, PhD/Economics
A. D. White, BEng, MBA, PhD/Management
A. J. Yatchew, BA, MA, PhD/Economics
X. Zhu, BSc, MSc, PhD/Economics

Associate Members

M. Alexopoulos, BSc, MA, PhD/Economics
M. L. Fuster, BA, MA, PhD/Economics
S. C. Goh, BSc, MA, PhD/Economics
J. Maheu, BA, MA, PhD/Economics
A. S. Maynard, MA, MPh, PhD/Economics
A. Park, MSc,MPh,Phd/Economics

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Introduction

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 will receive a professional degree called the Master of Financial Economics (M.F.E.). The 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.

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. Applicants must have a 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

The 16-month program consists of 12 half-courses, a 4-month summer internship, and an intensive mathematics, statistics, and accounting review. The core program consists of four courses from the Department of Economics and three courses from the Rotman School. The core courses drawn from the Department of Economics are the same as the core courses required for the M.A. 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 M.B.A. level courses and provide students with training in key areas of finance. In addition to the core courses, students are free to choose five electives from either the Department of Economics or the Rotman School, subject to the condition that at least 7 of their 12 half-courses 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 M.B.A. level (or higher) from the Rotman School.

Forestry FOR

Graduate Faculty

Full Members

R. A. Berry, BA, PhD, FRSC
T. J. Blake, BScF, STB, MF, PhD, DipFor
R. B. Bryan, BA, PhD
M. Campbell, BSc, MSc, PhD
T. J. Carleton, BSc MSc, PhD
J. P. Caspersen, BA, Ph.D
P. A. Cooper, BScF, MSc, BEd, PhD, Value-Added Wood and Composite Products Chair
S. Cowling, BSc, MSc, PhD
F. Csillag, MSc, PhD
J. E. Eckenwalder, BA, PhD
M.-J. Fortin, BSc, MSc, PhD
S. Kant, BE, MA, PhD
(Coordinator of Graduate Studies)
M. T. Kortschot, BASc, MASc, PhD, PEng
S. Laaksonen-Craig, MSc, PhD
J. Malcolm, BSc, MSc, PhD
D. L. Martell, BASc, MASc, PhD
A. G. Price, BSc, MSc, PhD
D. W. Reeve, BSc, MASc, PhD, DTechHC, FCIC, FTAPPI, PEng, Frank Dottori Chair in Pulp and Paper Engineering
R. F. Sage, BA, MS, PhD
M. Sain, BSc, BASc, MTech, PhD, PEng
C. T. Smith, BA, MS, PhD (Dean)
S. M. Smith, BSc, MSc, PhD
J. K. Spelt, BASc, MASc, ME, PhD, PEng
S.C. Thomas, BA, PhD
V. R. Timmer, BScF, MScF, PhD
R. R. White, BA, MSc, PhD
N. Yan, BASc, PhD

Members Emeriti

P. L. Aird, BScAgr, MS, PhD
J. J. Balatinecz, BSF, MF, PhD
M. Hubbes, DiplngAgr, DrAgr
D. N. Roy, BSc, MSc, DPhil, FRSC

Associate Members

D. Balsillie, BSc, MSC, PhD
I. Bellocq, LIC, PhD
W.G.. Cole, BScF, MScF, PhD
S. J. Colombo, BScF, MScF, PhD
P. de Groot, BScF, PhD
P. Duinker, PhD
M. Dumas, BSc, MScF, PhD
R. A. Fleming, BSc, PhD
W. A. Kenney, BSc MSc, PhD
J. Maini
D. Mcgregor, BSc, MES, PhD
D. McLaughlin, BScF, MScF
J. de J. Navar C., BScF, MScF, PhD
B. J. Naylor, BScF, PhD
J. Ray, BS, MS, PhD
J. Regniere, BSc PhD
C.B. Sastry, BSc, MSc, MS, PhD
P. Schliefenbaum, PhD
H. Spiecker, PhD
B. Stocks, BSc, MScF
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The Faculty of Forestry offers degree programs leading to the Master of Forest Conservation (M.F.C.), Master of International Trade in Forest Products (M.I.T.F.P.), Master of Science in Forestry (M.Sc.F.), and the Doctor of Philosophy (Ph.D.).

Forestry also participates in the following collaborative graduate programs:
1 Environmental Studies
2 Wood Products Engineering
See details below.

The M.F.C., 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 M.Sc.F. and Ph.D. programs are research/thesis-based degrees in areas of specialization relevant to faculty expertise and funding including, but not limited to, biodiversity conservation, sustainable forest management, forest fragmentation, wildlife habitat conservation, community forestry, international forest trade and policy, forest ecological processes, fire management systems, forest soils and tree nutrition, tree physiology and biotechnology, biological pest control, wood composites, and forest value-added wood products.

For admission to its degree programs, the Faculty considers candidates from a variety of undergraduate backgrounds including forestry;

applied science and engineering; and social, physical, and biological sciences.

Degree of Master of Forest Conservation

Admission Requirements

1 Candidates are admitted under the general regulations of the School of Graduate Studies.
2 Candidates must have an honours or specialist bachelor's degree with a minimum of mid-B standing in the final two years of the bachelor's program. The M.F.C. 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.
3 Applicants must submit additional documentation to the department with completed application forms and transcripts, including three references, a letter of interest in the M.F.C. program, and a resume. Full instructions and forms are available via the Faculty's Web site.

Program Requirements

The 16-month program (1.5 winter sessions) starts in September and requires full-time intensive involvement throughout. The program comprises a core of ten integrated half-courses, one residential field camp course (FOR 3011H), two elective half-courses, and an internship (FOR 3007H) during the summer semester in which students will work on practical forest conservation projects, either in Canada or abroad.

Information on specific course requirements and program schedules is included on the Faculty's Web site.

Degree of Master of Science in Forestry

Admission Requirements

1 Candidates are admitted under the general regulations of the School of Graduate Studies.
2 A candidate must have an 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 programs.
3 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

The program is prepared by the candidate 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.

The minimal requirements for this degree are:
1 Twelve months of residence including two academic terms.
2 Three half-courses, at least one of which is taken within the Faculty, plus, in the case of students with non-forestry backgrounds, one of

FOR 3000H Current Issues in Forest Conservation,
FOR 3002H Applied Forest Ecology and Silviculture,
FOR 3003H Socioeconomic Influences on Forest Ecosystems,
FOR 3004H Forest Management Decision Support Systems,
FOR 3009H Forest Conservation Biology,
or
FOR 3010H Sustainable Forest Management and Certification,

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.
3 Credit in FOR 1000H Research Methods in forestry and FOR 1001H Graduate Seminar.
4 The preparation of a research thesis of acceptable quality and its oral defence.
5 All requirements for the M.Sc.F. degree must be completed within five years from the date of first enrolment in the program.

Degree of Master of International Trade in Forest Products

Program Objectives

The objectives of the Master of International Trade in Forest Products (M.I.T.F.P.) program are:
1 to produce highly-qualified and competent graduates who combine knowledge of the forest products industry with a comprehensive understanding of the economic, financial, political, and legal factors which impact on

forest policies and international trade.
2 to produce graduates who are literate and articulate in both the theory and methodology of each of these disciplines and who can provide effective leadership in multidisciplinary teams.

Admission Requirements
1 Candidates are admitted under the general regulations of the School of Graduate Studies.
2 A candidate must have an appropriate four-year bachelor's degree from an approved university, with a standing of at least mid-B in the final two years of the bachelor's program. The M.I.T.F.P. program is intended for students with a strong undergraduate background in forestry, wood science, economics, management, finance, forest product development, or engineering; however, backgrounds in political science, anthropology, geography, or international studies will be considered. Admission is normally restricted to persons with significant relevant professional work or managerial experience.
3 Applicants must submit additional documentation to the department with completed application forms and transcripts, including three references, a brief, clear statement about their objectives in applying to the program and its relationship to their career objectives, and a resume. Full instructions and forms are available on the Faculty's Web site.

Program Requirements
Program objectives are achieved through lectures, seminars, case study analyses, and debates. These are organized in 6 short, intensive, residential modules at approximately two-month intervals, delivered over a period of 16 months (normally 4 consecutive sessions). Each module lasts one week (with the exception of one eight-day module), with approximately 42 contact hours each. Satisfactory completion of each module is a prerequisite for participation in subsequent modules. Program completion also involves a major research paper or case study analysis (FOR 3026H) which will be publicly presented in the final module, and subsequently submitted in written form.

Courses of Instruction
FOR 3020H Forest Policy and Management
FOR 3021H Natural Resource Economics
FOR 3023H International Trade
FOR 3024H International Trade Policy and Law
FOR 3025H International Finance
FOR 3026H Case Study in Forest Product Trade

Degree of Doctor of Philosophy

Admission Requirements
1 Admission to a four-year Ph.D. program in the Faculty of Forestry normally requires 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.
2 In exceptional circumstances, admission to a Ph.D. program may be approved for an extraordinarily strong applicant with an appropriate four-year University of Toronto bachelor's degree, or equivalent from a recognized university.
3 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.

Transfer from A.Sc.F. to Ph.D.
Under certain specific conditions, outstanding registered M.Sc.F. students may be considered by the end of their first year in the M.Sc.F. program for transfer to the Ph.D. program. Further information is available from the Faculty.

Program Requirements
The minimal requirements for the Ph.D. are:
1 Study in one major and at least one minor field. A minimum of four half-courses must be taken in total, including at least one full course in each of the major and the minor areas; a minor outside forestry is strongly recommended. Depending on the student's background, additional or alternative course work may be required.
2 Credit in FOR 1001H *Graduate Seminar.*
3 *A* student who is approved for transfer from the M.Sc.F. to the Ph.D. is required to complete, as a minimum, the M.Sc.F. course requirements (including FOR1000H *Research Methods* and FOR 1001H *Graduate Seminar,* plus three half-courses) plus one additional half-course. These courses should represent a major and a minor field.
4 For students with a non-forestry background, credit in one of
FOR 3000H Current Issues in Forest Conservation,
FOR 3002H Applied Forest Ecology and Silviculture,
FOR 3003H Socioeconomic Influences on Forest Ecosystems,
FOR 3004H Forest Management Decision Support Systems,

FOR 3009H Forest Conservation Biology,
or
FOR 3010H Sustainable Forest Management and Certification,
on the recommendation of the student's supervisory committee and approval of the Graduate Coordinator.

5 Successful completion of a comprehensive examination. This will ordinarily be taken early in the second year of the program.

6 The preparation and defence of a thesis that is an original and independent research work adding significantly to the existing body of knowledge.

7 A full-time commitment is expected for a minimum of the first two years in the forestry program.

Collaborative Programs

Environmental Studies—M.F.C. and M.Sc.E

Forestry and a number of other graduate divisions, in conjunction with the Institute for Environmental Studies, offer collaborative master's programs in environmental studies.

Upon successful completion of the requirements, the student receives, in addition to the degree, the notation "Completed Collaborative Program in Environmental Studies" on the transcript.

Requirements for this certification include the normal degree requirements outlined above with an extended residence requirement. Course selections must include IES 1001H Environmental Decision Making and IES 1002H Environmental Management Case Studies.

Thesis research programs will be guided by a supervisor and supervisory committee including at least one member cross-appointed between the Faculty of Forestry and the Institute for Environmental Studies.

For a full description of this program, see the Environmental Studies (Collaborative Program) entry in this calendar.

Wood Products Engineering—M.Sc.F./ M.A.Sc,

Forestry, Chemical Engineering and Applied Chemistry, and Mechanical and Industrial Engineering collaborate to offer a master's program in Wood Products Engineering. For more details, consult the separate entry under Wood Products Engineering in this calendar.

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

Courses of Instruction

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 term 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)/S. M. Smith, T: J. Blake
FOR 1001H° Graduate Seminar (Credit/No Credit)/S. M. Smith,T J. Blake
FOR 1060H Soil Fertility and Tree Nutrition/ V. R. Timmer
FOR 1280H Wood Products and Processing/ P. A. Cooper
FOR 1282H Wood Chemistry/M. Sain, N. Yan
FOR 1284H Bonding and Adhesion Technology/N. Yan
FOR 1286H Natural Fibre Production Technology/M. Sain, N. Yan
FOR 1288H Wood Composites Processing/ M. Sain
FOR 1290H Wood and Material Science/P.A. Cooper, M. Sain
FOR 1292H Long Term Performance and Durability of Wood-Based Materials/P.A. Cooper, M. Sain, N. Yan
JFE 1300H Wood Products Engineering Internship (Credit/No Credit)/Staff
FOR 1321H Stand Structure and Dynamics/ S. Thomas
FOR 1322H Forests and Global Change/ J. Caspersen
FOR 1331H Advanced Forest Entomology/ S. M. Smith
FOR 1412H Natural Resource Management I (Directed Studies Course)/Staff
FOR 1413H Natural Resource Management II (Directed Studies Course)/Staff
FOR 1414H Forest Fire Management Systems/D. L. Martell
FOR 1415H Decision-Making in Forest Management/D. L. Martell
JFG 1417H Dryland Environmental Management/R. B. Bryan
JBF 1436H Forest Landscape Ecology and Methods/T. J. Carleton
JFS 1460H Community Based Natural Resource Management/S. Kant

FOR 1470H International Trade, Environment and Sustainable Development/ S. Laaksonen-Craig
FOR 1555H Wildlife Ecology and Conservation/J. Malcolm
FOR 1570H Ecological Principles of Agroforestry/ W. A. Kenney
FOR 1575H Urban Forest Conservation/ W. A. Kenney
FOR 1580H Ecology, Management, and Conservation of Tropical Forests/ T. J. Blake
FOR 1610H Forest Policy Development and Issues/Staff
FOR 1900H Advanced Topics in Forestry I (Directed Studies Course)/Staff
FOR 1901H Advanced Topics in Forestry II (Directed Studies Course)/Staff
FOR 3000H Current Issues in Forest Conservation/R. Bryan
FOR 3001H Biodiversity of Forest Organisms/ T. J. Carleton
FOR 3002H Applied Forest Ecology and Silviculture/S. Thomas
FOR 3003H Socioeconomic Influences on Forest Ecosystems/S. Kant
FOR 3004H Forest Management Decision Support Systems/D. L. Martell
FOR 3005H Stresses in the Forest Environment/T J. Blake
FOR 3006H Case Study Analysis in Forest Management/R. Bryan
FOR 3007H+ Internship in Forest Conservation (CrediVNo Credit)/W. A. Kenney
FOR 3008H Research Paper in Forest Conservation/T. J. Blake
FOR 3009H Forest Conservation Biology/J. R. Malcolm
FOR 3010H Sustainable Forest Management and Certification/Staff
FOR 3011H International Forest Conservation Field Camp (Credit/No Credit)/ T. J. Blake, A. Kenney

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

French Language and Literature FRE

Graduate Faculty

Full Members

P. M. Bhatt, BA, MA, PhD (Chair)
B. Bolduc, BA, MA, PhD
A. M. Brousseau, PhD
D. Clandfield, BA, MA, PhD, D lle
F. Collins, MA, PhD
A. Cozea, BA, MA, PhD
M. Danesi, BA, MA, PhD, FRSC
D. De Kerckhove, BA, MA, PhD, Dip 3eme Cycle, FRSC
C. Elkabas, BA, MA, PhD
B. J. Havercroft, BA, MA, PhD
R. Le Huenen, L es L, DenPh, ChPA, FRSC
J. LeBlanc, MA, PhD
M. Lord, BA, MA, PhD
P. J. Martin, IRAL BR, D lle C, DSCA,ChPA
D. Massam, BA, MA, PhD
A. Motsch, MA, PhD
J. Ndayiragije, BA, MA, PhD
E. Nikiema, MA, PhD
M. O'Neill-Karch, MA
W. A. Oliver, MA, PhD, D de L'U
J. M. Paterson, MA, PhD, FRSC
P. Perron, BA, D de L'U, ChPA, OPA, FRSC
Y. Roberge, BA, MA, PhD

Members Emeriti

C. L. Bertrand-Jenning, L es L, PhD
P. Bouissac, L es L, DES, D en Ph
N. T. Boursier, DES, CAPES, D lle C
F.I. Case, MA, D de L'U
C. Cloutier-Wojciec, L es L, DES, MA, MPh, DPS, DUP
J. A. Dainard, MA, PhD
A. G. Falconer, MA, D de L'U
B.T. Fitch, BA, D de L'U, FRSC, University Professor Emeriius
P. Fitting, MA, PhD
J. A. Fleming, BA, MA, PhD
C.M. Grise, MA, PhD, ChPA
E. A. Heinemann, MA, PhD
L. C. Kerslake, AM, PhD
E. K. Kushner, MA, PhD, FRSC
E. Lehouck, AGR,ESS, D Phl
P. Leon, L es L, D de L'U, D es L. D Hon Causa, CdrPA FISPSc, FRSC
J. A. McClelland, MA, PhD
B. Merrilees, MA, D de L'U,FRSC, Professor Emeritus
O. J. Miller, MA, D de L'U
P. W. Nesselroth, MA, PhD, ChPA
J. Savona, L es L, DES, CAPES, D de L'U
B.-Z. Shek, MA, PhD, FRSC
D. W. Smith, EA, PhD, FRSC
J. C. Susini, L es L, DES, CAPES, AGR de L'U
R. Taylor, MA, PhD
C. Tolton, BA, AM, PhD
J. A. Walker, MA, PhD
T. R. Wooldridge, BA, D de L'U

Associate Members

J. Auger, BA, MA, PhD
Y. Benayoun-Szmidt, BA, MA, PhD
J. Carley, BA, MA, PhD
B. Corman, AB, AM, PhD
S. Crosta, BA, MA, PhD
G. Di Stefano, MA, PhD
G. Fenwick, EA, BEd, MA, PhD
M. Finn, BA, MA, PhD
M. S. Heller, BA, MA, PhD
M. Jeay, BA, MA, PhD
E. T. Jennings, BA, MA, PhD
T. Lahusen, BA, MA, PhD
F. Martineau, BA, MA, PhD
P. G. Michelucci, MA, PhD
M. E. Nyquist, BA, MA, PhD
A. T. Perez-Leroux, BA, MA, PhD
M. Pirvulescu, BA, MA, PhD
Y. Portebois, MA, PhD, Canada Research Chair
K. D. Rice, BA, MA, PhD
P. Riendeau, BA, MA, PhD
D. M. Rojinsky, BA, MA, PhD
R. Runte, BA, MA, MPh, PhD
R. M. Sarabia, BA, MA, PhD
A. G. Sevigny, BA, MA, PhD
D. E. Speirs, BA, MA, PhD
J. Steele, BA, MA, PhD
J. C. Teixeira, BSc MSC, PhD
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All applicants must arrange for two supporting letters to be sent to the Department; admission to all programs for post-graduate degrees will be based upon the evidence of these supporting letters as well as upon the candidate's academic record.

All incoming students will meet with the Associate Chair or the Graduate Secretary to discuss the program and to decide on their course of study before beginning classes.

Degree of Master of Arts

Admission Requirements

Candidates are accepted under the general regulations. They must also meet the following requirements.

1 B+ average standing or better, with at least B+ in French.

2 Competence in French.

3 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).

A B+ average does not automatically lead to admission. Each dossier is studied by the Admissions Committee which takes into account all relevant factors.

Program Requirements

The M.A. program is both a self-contained program and the first stage towards doctoral studies. It has two objectives: to allow the student to develop a thorough knowledge of the discipline through a program of course work in literary studies or linguistics; to develop an aptitude for research. It is a twelve-month program. At the beginning of his or her course of study, the student will meet 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.

1 Courses. Students in both literature and linguistics are required to complete four full-course equivalents as follows:

a the graduate seminar in literature (FRE 1200Y) or the graduate seminars in linguistics (FRE 1103H, FRE 1104H, and FRE 1125H). Part-time students will normally take these courses in the first year of their programs.

b Students in literature will take three full-course equivalents from the regular graduate course offerings or two and a half full-course equivalents and a half-course Research Essay FRE 5001H, a memoire of approximately 35 pages, or two full-course equivalents and a full-course Research Essay FRE 5000Y, a 65-75 page memoire.

Students in linguistics will take two and a half full-course equivalents from the regular graduate offerings or two full-course equivalents and a half-course Research Essay FRE 5001H, a memoire of approximately 35 pages or one and a half-full course equivalents and a full-course Research Essay FRE 5000Y, a 65-75 page memoire.

2 Prerequisite work, if necessary.

3 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).

4 Up to one full-course equivalent may be taken outside the Department.

Degree of Doctor of Philosophy

Admission Requirements

1 Applicants approved by the Department are admitted as candidates for this degree under the general regulations of the School of Graduate Studies.

2 Admission to the Ph.D. program requires either:

a 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, or

b 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.

3 All applicants must submit to the Department a formal application and a sample of written work completed as part of their 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 to the Department a typewritten 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 at an advanced level.

4 An A- average does not automatically lead to admission. Each dossier is studied by the Admissions Committee which takes into account all relevant factors. Admission to the Ph.D. on the basis of a four-year bachelor's degree is limited to exceptionally qualified candidates.

Program Requirements

A Ph.D. candidate shall pursue a program of study and research in French Literature/Linguistics approved by the Department. The minimum requirements for the degree are as follows:

1 Course work. A candidate admitted on the basis of a four-year bachelor's degree is required to complete four full-course equivalents during the first year of the program and three and a half additional full-course equivalents during the second year of the program. With the permission of the Department, the candidate 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 will take FRE 1200Y and FRE 1201H as part of their program; students in linguistics will 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 Ph.D. program, a candidate must complete four full-course equivalents, with an average grade of at least an A-, by the end of the first year of the program and complete the remaining three and a half full-course equivalents, maintaining an average of at least an A-, by the end of the second year.

A candidate admitted on the basis of a master's degree is required to complete three and a half full-course equivalents during the first year of the program. With the permission of the Department, the candidate may take one full-course equivalent outside the Department. Students in literature will take FRE 1200Y, unless this course or its equivalent has already been completed, and FRE 1201H as part of their program; students in linguistics will 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 Ph.D. program, a candidate must complete three and a half full-course equivalents, with an average grade of at least an A-, by the end of the first year of the program.

2 Thesis topics. By September 15 of the second year of registration, in the case of a student admitted to the Ph.D. program on the basis of a master's degree, otherwise by September 15 of the third year of registration, a candidate 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.

3 Language requirements. By the end of the first year of the Ph.D. 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 Ph.D. program, the student must demonstrate a reading knowledge of Old French or of another language (excluding French or English), as approved by the Department.

4 Field examination. No later than the second session of the second year of registration in the Ph.D. program, in the case of a candidate admitted on the basis of a master's degree, otherwise no later than the second session of the third year of registration, a candidate must pass the two parts of the field examination:

a 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—the questions for the examination are given to the student a week in advance of the examination; and

b 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 research for the thesis.

5 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.

6 Thesis and oral examination on the thesis.

Collaborative Programs

The Department of French participates in the following collaborative programs:

1 Book History and Print Culture
2 Editing Medieval Texts
3 Semiotics
4 Women's Studies

Each of these programs has its own entry in this calendar and interested students should refer to these entries.

Courses of Instruction

All courses are held once a week for two hours. Courses begin in the same week as do undergraduate classes.

Linguistics Courses

FRE 1103H Seminaire de linguistique I: Phonetique et phonologiel Ph. Martin

FRE 1104H Seminaire de linguistique II: Syntaxe/ Y. Roberge

FRE 1108H Theorie linguistique et acquisition du francais langue secondel J. Steele

FRE 1125H Seminaire de linguistique III: Morphologie et semantique/ M. Pirvulescu

FRE 1126H Seminaire de syntaxe: Modification adjectivale/J. Ndayiragije
FRE 1128H Le franqais en contact/A.-M. Brousseau
FRE 1132H Problemes de phonologie: les Creoles a base lexicale franqaise/E. Nikiema

Linguistic and Literature Courses

FRE 1135H Histoire de la langue II: les dictionnaires (19e siecle)/ Y Portebois
FRE 1164H Initiation a I'ancien franqais/Staff
FRE 1201H Methodes de recherche (Credit/No Credit)/A. Motsch

Literature Courses

FRE 1200Y Seminaire de littérature/ J. Paterson
FRE 1709H Histoire, critique et theorie litteraires: le cas Racine/ B. Bolduc
FRE 1904H L'edition critique: principes et pratiques/D.. Speirs
FRE 1924H Balzac et le discours prefaciell R. Le Huenen
FRE 1928H Zola et le naturalisme/C. Elkabas
FRE 2007H Litterature et ethique: nouveaux textes, nouvelles problematiques/P. Riendeau
FRE 2036H Configurations du genre sexuel dans la prose contemporaine des femmes/B. Havercroft
FRE 2105H Ecritures du moi: de la representation textuelle a la representation visuelle du sujet ecrivant/J. LeBlanc
FRE 207H Le recit fantastique quebecois: formes et transformations/ M. Lord
FRE 3000H Du dialogue au dialogique/ A. Motsch
FRE 3001H Poesie et philsophie; du devoir de bavarder de notre Etre-lá/ A. Cozea

Other Courses

FRE 4000Y Reading Course/Staff
FRE 4001H Reading Course/Staff
FRE 5000Y° Research Essay/Staff
FRE 5001H° Research Essay/Staff

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 5018H Gender, Agency and Life Writing/ B. Havercroft
COL 5033H Visual Portraitures in Contemporary Autobiographical Narratives/ J. LeBlanc

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

Geography GGR

Graduate Faculty

Full Members

C. G. Amrhein, BSc PhD, MClP
B. Branfireun, HBA, MSc, PhD
M. F. Bunce, BA, PhD
M. Chen, BSc, PhD
S. Cowling, BSc, MSc, PhD
F. Csillag, MSc, PhD
A. Daniere, MPP, PhD, MClP
A. M. Davis, BA, MA, PhD
J. R. Desloges, BES, MSc, PhD (Chair)
M. L. Diamond, MSc, PhD
R. J. DiFrancesco, MA, PhD, MClP
M. S. Gertler, BA, MCP, PhD, MCIP, Goldring Chair in Canadian Studies (UC), Vice-Dean Graduate Research & Education
E. Gilbert, BA, MA, PhD
K. Goonewardena, BSc, MPI, PhD
W. A. Gough, BSc, MSc, PhD
B. Greenwood, BSc, PhD, Hon Causa
R. Hackworth, BA, MA, MEP, PhD
L. D. Harvey, BSc, MSc, PhD
D. Leslie, BA, MA, PhD
R. D. Lewis, BA, MA, PhD (Coordinator of Graduate Studies)
V. W. Maclaren, BA, MAP, MSc, PhD, MClP
J. Malcolm, BSc, MSc, PhD
D. A. McQuillan, BA, MA, PhD, DipEd
J. R. Miron, BA, MA, MSc, PhD
D. S. Munro, BSc, MSc, PhD
A. G. Price, BSc, MSc, PhD
W. Prudham, BArtSc, MA, PhD
K. Rankin, BA, MRP, PhD
E. C. Relph, BA, MPh, PhD
V. Robinson, MS, PhD
S. Ruddick, BES, MA, PhD, MCIP
M. Simpson, Phd 1999, BS 1993
A. Sorensen, PHD 1998, MS 1993, BA 1983
R. R. White, BA, MSc, PhD

Members Emeriti

L. S. Bourne, BA, MA, PhD, FRSC, MCIP, Hon Causa
J. N. Britton, BA, MA, PhD
W. G. Dean, MA, PhD
G. H. Gad, DrPhil, PhD
J. H. Galloway, BA, MA, PhD
R. Jaakson, EA, MSc, PhD, MClP
D. Kerr, MA, PhD
P. D. Kerr
J. T. Lemon, MS, PhD
T. Mcllwraith, BA, MA, PhD
S. T. Roweis, MSc, PhD
J. Simmons, MA, PhD
J. W. Simmons
J. B. Whitney, PhD, MCIP

Associate Members

A. Boland, BA, MAIS, PhD
B. Buliung, BA, MA, PhD
T. Conway, BSc, MA, PhD
P. Desrochers, BSc MA, PhD
K. E. Duncan, PhD
J. Dunn, BA, MA, PhD
S. Finkelstein, AB, MPhil, PhD
A. P. Grima, BA, MA, PhD
C. Gubala, PhD
M. Hess, BA,MUP,PhD
S. Labatt, BA, MA, PhD
J. Layton, BA, MA, PhD
A. Lea, PhD
M. Mahtani, BA,
S. Makuch, LLM
C. F. Marchand, BA, MA, PhD
D. Mcgregor, BSc, MES, PhD
B. Murck, BA, PhD
B. D. Poland, BA, MA, PhD
C. Rinner, BSc, MSc,PhD
E. Slack, Phd
S. Wakefield, BA, MA, PhD
A. Walks, BA, MA, PhD
K. Wilson, BA, MA, PhD

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The Department of Geography offers facilities for research in 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.

Candidates are accepted under the provisions of the general regulations for study at the

M.A., M.S.A., M.Sc., and Ph.D. levels. International students whose primary language is not English must have a TOEFL score of at least 580 and a TWE score of 5 or higher on the paper-based test. A minimum score of at least 237 with an Essay Rating score of at least 5 is required on the computer-based test.

Degree of Master of Arts/Master of Science

Admission and Program Requirements
Normally the Department requires a minimum B+ standing in the final two years of an appropriate four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, for admission to the M.A. and M.Sc. programs. Candidates are expected to have completed at least eight half-courses in geography or a related field. Candidates 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. Candidates 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.

Two geography programs and various collaborative programs are available; selection is made with the approval of the Department. Within most of these programs, students can be awarded a Master of Science degree if their research contains a substantial physical science component and if two-thirds of their course work comprise Geography courses accepted by the Department as physical science courses. Programs are usually completed in a 12-month period, excepting the Collaborative Environmental Studies research paper program and Collaborative International Relations program.

Progress into the second term is dependent on achieving an overall B average in the first term and satisfactory progress as outlined in the Graduate Geography Handbook.

Program I—Thesis
Candidates will undertake research leading to the preparation of a thesis, in conjunction with at least the equivalent of 1.5 full graduate courses including any required core courses.

Program II—Research Paper
Candidates will take the equivalent of three full graduate courses and pursue a research project, normally during the summer, leading to the preparation of a research paper (GGR 1100Y).

Collaborative Programs
The Department of Geography participates in the following collaborative programs. Please consult the separate entries in this calendar for details.

1 Asia-Pacific Studies
2 Community Development
3 Environment and Health (consult the full
4 Environmental Studies entry in this calendar)
5 Environmental Studies (see below)
6 Ethnic and Pluralism Studies
7 International Relations
8 South Asian Studies
9 Women's Studies

Environmental Studies Research Paper (Collaborative M.A./M.Sc. Program)
Candidates will take the equivalent of seven graduate half-courses. Three of these courses must be taken in the Department of Geography (including the core course), one in a related discipline, and three at the Institute for Environmental Studies (two must be Institute core courses). This program is normally completed in 17 months, but can be completed under certain circumstances in 12 months.

Candidates 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 M.A./M.Sc. Program)
Candidates will take the equivalent of four graduate half-courses. Two of these courses must be taken in the Department of Geography and two at the Institute for Environmental Studies. Candidates are also required to prepare and defend a thesis.

Degree of Master of Science in Planning
Students interested in the M.Sc.PI. program should consult the Planning entry in this calendar.

Degree of Master of Spatial Analysis
The Master of Spatial Analysis (M.S.A.) degree program is offered jointly by the Department of Geography at the University of Toronto and the School of Applied Geography and the Centre for the Study of Commercial Activity at Ryerson Polytechnic University. The minimum requirement for admission is a B average in a four-year undergraduate degree or its equivalent. In addition, applicants must have achieved a minimum B+ average in their last four semesters of undergraduate study. Also applicants should have at least either a one-semester credit in

GIS or a one-semester credit in applied statistics or quantitative methods in their undergraduate program.

The study program emphasizes knowledge of GIS, spatial statistics, and inferential modelling. The program requires that the student complete six half-courses (four core and two electives), a practicum (for full-time students only), and a research paper. The four core courses are common to all students; the elective courses are chosen from the two streams: physical/landscape and business/commercial. The research paper must be presented and defended in an oral examination before a committee of faculty members. This is a 12-month full-time program or 24-month part-time program.

Degree of Doctor of Philosophy

Admission Requirements

Normally the Department requires a minimum A- standing at the master's level for admission to the Ph.D. program. In exceptional cases and at the discretion of the Department, admission to the Ph.D. 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. Such students must complete three half-courses in addition to the doctoral course work requirements. Candidates 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.

Program Requirements

The Ph.D. 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. 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. Residence provides the student with an opportunity to become immersed in the intellectual environment of the University.

Program candidates must:

1 complete at least the equivalent of four half-courses and, depending on the field of specialization, up to two additional half-courses. At least one half-course must be, and up to three half-courses may be, taken in other departments;

2 submit a research statement concerning the proposed Ph.D. topic and the scope of the Ph.D. examination by the end of April in Year I;

3 pass a Ph.D. examination in the general field in which research is being undertaken by the end of Year I;

4 upon the recommendation of their committee, be required to acquire a knowledge of a foreign language necessary for their research;

5 submit a research proposal that is acceptable to their research committee by the end of the first session in Year II;

Ph.D. degree program requirements are fully described in the Graduate Geography Handbook, which all students receive on registration, and the department's Web site www.geog.utoronto.ca.

Credit for M.A/M.Sc. Courses

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 two full courses with the Department after entering the Ph.D. program.

Courses of Instruction

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 Ph.D. students only.

GGR 1100Y° Research Paper (Credit/No Credit)/Staff
GGR 1101H History of Geographic Thought/ J. H. Galloway
GGR 1102H Contemporary Issues in Geographic Thought/Staff
GGR 1110H Issues of Geographic Thought and Practice/R.. Lewis, S. Prudham
GGR 1111H Research Practice in Geography/ K. Wilson
GGR 1149H Readings in Selected Topics/Staff
GGR 2149H Readings in Selected Topics/Staff
GGR 2150H, Y Advanced Seminar in Selected Topics/Staff

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

Physical Geography

GGR 1201H Hillslope Geomorphology/R. B. Bryan
GGR 1202H Sedimentation and Fluvial Geomorphology/R. J. Desloges
GGR 1203H Coastal Hydrodynamics, Sediment Mechanics and Morphodynamics/B. Greenwood
GGR 1204H Soil Erosion Research/ R. B. Bryan
GGR 1205H Theoretical Geomorphology/ B. Greenwood
GGR 1206H Sedimentary Models/ B. Greenwood
GGR 1208H Experimental Methods in Erosion Research/R. Bryan
JGE 1212H Fate of Contaminants in Land and Water/M. Diamond
GGR 1214H Global Ecology and Biogeochemical Cycles/S. Cowling
GGR 1302H Advanced Hydrology and Water Quality B. A. Branfireun
GGR 1304H Landscape Biogeography/V: B. Robinson
GGR 1305H Biogeography/A. M. Davis
GGR 1306H Measurement and Modelling of Surface Environments/D. S. Munro
GGR 1307H Cultural Biogeography/A. M. Davis
GGR 1308H Process Hydrology/A. G. Price
GGR 1310H Climate Modelling/L. D. D. Harvey
GGR 1311H Atmosphere-Ocean Modelling/ W. A. Gough
GGR 1314H Topics in Physical Oceanography/ W. A. Gough

Environmental and Resource Geography

Incoming students in Environmental and Resource Geography must take GGR 1110H.

JPG 1402H Environment and Development/ A. Boland
JPG 1404H Issues in Global Warming/L. D. D. Harvey
GGR 1412H Strategies for Sustainable Development/Staff
JPG 1413H Workshop in Environmental Impact Assessment/Staff
JPG 1415H Environmental Justice/R. Jaakson
JPG 1416H Environmental Consequences of Land Use Change/T: Conway
JFG 1417H Dryland Environmental Management/R B. Bryan
JPG 1418H Rural Land Use Planning/ M. Bunce
JPG 1419H Aboriginal/Canadian Relations in Environmental and Resource Management/ D. McGregor
JGE 1420H Urban Waste Management: an International Perspective/ V W. Maclaren
GGR 1421H Medical Geography/Staff
JPG 1421H Health in Urban Environments/ S. Wakefield
JGE 1430H Political Economy of Forest Conservation/Staff
JPG 1508H Planning for the Urban Poor in Developing Countries/A. G. Daniere

Urban and Economic Geography

Incoming students in Urban and Economic Geography must take GGR 1110H.

JPG 1501H The Political Economy of Cities/ J. Hackworth
GGR 1504H Health, Place and Difference/ K. Wilson
JPG 1506H State/Space/Difference: Understanding the New Social Geography of the State/ S. Ruddick
JPG 1507H Housing and Housing Policy/L.S. Bourne
JPG 1509H Gender, Place and the Politics of Development/K.N. Rankin
JPG 1510H Recent Debates on Urban Form/ A. Sorensen
JPG 1554H Transportation and Urban Form/ P. Hess, A. Sorensen
GGR 1602H Industry: Location, Behaviour, Policy/J.N.H. Britton
JPG 1609H Cities, Industry and the Environment/P Desrochers
JPG 1614H Regional Development and Policy/M. S. Gertler
JPG 1615H Planning and Financing the Social Economy/K. N. Rankin
GGR 1651H Population Analysis: Research Seminar/J. Miron
JPG 1670H Regional Economic Analysis/R. J. DiFrancesco
GGR 1680H Geography of Tourism/R. Jaakson

Historical, Social, and Cultural Geography

Incoming students in Cultural and Historical Geography must take GGR 1110H.

GGR 1700H Seminar in Cultural-Historical Geography/J. H. Galloway
GGR 1701H Historical Geography of North America/T: E Mcllwraith
JPG 1702H Historical Urban Geography and Planning/R. D. Lewis
GGR 1704Y Latin America/J.H. Galloway
JPG 1710H Historic Preservation Planning/ Staff

GGR 1712H Historical Geography of Ethnic Groups in Canada/D.A. McQuillan
JPG 1713H Place, Design, and Landscape/ E. C. Relph
GGR 1714H Cultural and Critical Geographies/ E. Gilbert
GGR 1801H Social Identities and Space/Staff
JPG 1804H Space, Power and Geography: Understanding Spatiality/ S. Ruddick
JPG 1810H Globalization and Postmodern-ism/K. Goonewardena

Geographical Information Analysis

GGR 1901H Introductory Analytical Methods/ Staff
GGR 1903H Multivariate Statistical Methods in Geography/Staff
GGR 1904H Accuracy of Spatial Databased F: Csiliag
JPG 1906H Geographic Information Systems/ D. Boyes
GGR 1907H Advanced Geographic Informa-tion Systerns/Staff
JPG 1909H Social Survey Methods/Staff
GGR 1911H Remote Sensing/J. Chen
GGR 1913H Digital Cartography/C. Rinner
JPG 1914H Spatial Information Systems/ J. Chen, D. Boyes
GGR 1921H Land/Geographic Information Systems/V: Robinson
GGR 1922H Intelligent Land Database Systems/V: Robinson

Master of Spatial Analysis

MSA 1100H Research Paper (Credit/No Credit)
MSA 9010H Accuracy of Spatial Databases/ F. Csillag
MSA 9020H Geographic Spatial Database Management and Spatial Technologies/Staff
MSA 9030H Analytical Methods and Spatial Data/Staff
MSA 9040H GIS Project Management Applica-tions/C. Rinner
MSA 9050H Digital Cartography/C. Rinner
MSA 9110H Geodemographics/Staff
MSA 9120H Spatial Technologies in Strategic Planning/Staff
MSA 9210H Measurements and Modelling of Surface Environments/S. Munro
MSA 9220H Remote Sensing/J, Chen
MSA 4444H Practicum (for full-time students only)
MSA 9230H Land/Geographic Information Systems/V. Robinson

Geology GLG

Graduate Faculty

Full Members

R. C. Bailey, BSc, PhD
J. M. Brenan, BSc, PhD
(Associate Chair, Graduate Studies)
S. Cowling, BSc, MSc, PhD
A. R. Cruden, BSc, PhD
D. W. Davis, BSc, PhD
M. S. V. Douglas, BSc, MSc, PhD
N. Eyles, BSc, MSc, PhD
F. G. Ferris, BSc PhD
M. P. Gorton, BSc PhD
B. Greenwood, BSc, PhD, Hon Causa
H. C. Halls, BSc, MSc, PhD
G. S. Henderson, BSc, MSc, PhD
K. W. Howard, BSc MSc, PhD
A. J. Locock, BSc, MSc, PhD
A. D. Miall, BSc, PhD, DSc, Hon Causa, FRSC
J. E. Mungall, BSc MSc, PhD
R. Pysklywec, BSc, PhD
P. Y. Robin, BSc, MSc, PhD
D. Schulze, BA, MSc, PhD
S. D. Scott, BSc, MSc, PhD, Hon Causa, FRSC, Dr. Norman B. Keevil Chair in Ore Genesis, McRae-Quantec Chair in Geosciences (Chair)
B. Sherwood Lollar, BA, PhD
E. T. C. Spooner, BA, PhD
G. Srinivasan, BSc MSc, PhD
P. H. Von Bitter, BA, MA, PhD
J. A. Westgate, BSc, PhD
U. G. Wortmann, Dip Geol, Dr. Rer Nat
R. P. Young, BSc, PhD

Members Emeriti

G. M. Anderson, BEng, MASc, PhD
T. E. Krogh, MSc, PhD
A. J. Naldrett, BA, MSc, PhD, FRSC , University Professor Emeritus, Emeritus Dr. Norman B. Keevil Chair in Ore Genesis
G. Norris, BA, MA, PhD, FRSC
J. C. Rucklidge, BA, PhD
W. M. Schwerdtner, DrRerNat, DipGeol, BSc, PhD
F. J. Wicks, BSc, PhD

Associate Members

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The Department of Geology accepts candidates for advanced degrees in a broad range of topics in the Earth Sciences. Candidates may also undertake studies in interdisciplinary areas by arrangement with other departments such as Physics, Chemistry, Materials Science and Engineering, Civil Engineering, Zoology, Botany, and the Institute for Environmental Studies.

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, and advanced studies are encouraged in a broad spectrum of geological problems. Further details of research emphases, facilities, detailed degree requirements, and graduate courses are contained in a brochure entitled *Graduate Studies in Geology* that may be obtained from the Department.

Candidates are accepted under the general regulations. The Department has no formal foreign language requirements. Candidates proceeding by thesis to any degree are expected to become familiar with the literature of their subjects, in whatever language it is written.

Degree of Master of Science

Candidates are required to complete five full courses that (a) include a supervised research component equivalent to two or three courses or (b) consist of lecture course work only. Doctoral stream candidates should normally choose option (a). To encourage breadth of study, the Department will permit students to substitute up to 50% of the program requirement of five full graduate courses with equivalent non-geology courses. Candidates may proceed on a part-time basis.

Degree of Master of Applied Science

Candidates are normally required to complete two specialized graduate courses and the graduate seminar course in addition to the main requirement for the degree which is the preparation of a research thesis. Minimum full-time residence is one academic session.

Environmental Studies (Collaborative Program)

Geology and a number of other graduate units, in conjunction with the Institute for Environmental Studies (IES), offer a collaborative master's program in environmental studies. Normally, the

program consists of three IES half-courses and eight geology half-courses. For a full description of this program, see the Environmental Studies (Collaborative Program) entry in this calendar.

Geology and Physics (Collaborative Program)

The departments of Geology and Physics offer a collaborative master's program. Normally the students apply to either Geology or Physics as their home department, but take courses in each. For a full description of the program, see the Geology and Physics (Collaborative Program) entry in this calendar.

Degree of Doctor of Philosophy

The principal work for the Ph.D. degree is the preparation of a research thesis constituting a significant contribution to the knowledge of the earth. A candidate for the Ph.D. degree is normally required to complete a minimum of 1.5 graduate level full-course equivalents (FCE), which corresponds to three half-courses. One or more of these half-courses 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. There are no course requirements for students who begin the Ph.D. program directly from the Department's research-based MSc. In all cases, the candidates's supervisory committee reserves the right to assign additional courses if they feel that the candidate is deficient in a subject area essential to the research.

Students are normally expected to complete the M.Sc. degree before proceeding to the Ph.D. but exceptions may be made when the student has the appropriate research experience. Normal departmental rules for the completion of the Ph.D. apply (see departmental brochure).

Courses of Instruction

Check with the Department for current year's offerings.

GLG 1100Y Seminars in Geology
GLG 1101H Seminars in Geology
GLG 1423H Mineralogy/G. S. Henderson
GLG 1430H Basin Analysis/A. D. Miall
GLG 1436H Paleoecological Assessment of Environmental Change/ M. Douglas
GLG 1440H Petrology/J. M. Brenan
GLG 1442H Introductory Mineral Deposits I/ E. T: C. Spooner
GLG 1443H Introductory Mineral Deposits II/ S. D. Scott
GLG 1450H Contaminant Fate and Transport in Subsurface Environments/ B. Sherwood Lollar
GLG 1465H Geodynamics/R. Pysklywec
GLG 2220H Structural Analysis/P.Y F: Robin
GLG 2222H Tectonic Modelling/A. R. Cruden, R. Pysklywec
GLG 2302H Mineral Deposits Geology/S. D. Scott, E. T: C. Spooner
GLG 2306H Geochemistry of Hydrothermal Ore Deposits/S. D. Scott, E. T. C. Spooner
GLG 2602H Regional Precambrian Geophysics/H. C. Halls .
GLG 2603H Applied U-Pb Geochronology/ D. W Davis
GLG 2605H Sedimentary Basin Analysis I/ A. D. Miall
GLG 2606H Sedimentary Basin Analysis II/ A. D. Miall
GLG 2608H Advanced Glacial Sedimentology/ N. Eyles
GLG 2612H Geology and Geochemistry of Magmatic Ores/J. Mungall
GLG 2613H Advanced Igneous Petrology/ J. Brenan
GLG 2701H Advanced Microbial Geochemistry/F: G. Ferris
GLG 2703H Environmental Isotope Geochemistry/5. Sherwood Lollar
GLG 2704H Isotope Geochemistry of Planetary Bodies/G. Srinivasan
GLG 2705H Techniques in Paleo-environmental Research/Staff
GLG 2706H Mantle Petrology/D. J. Schulze
GLG 2708H Instrumental Methods of Rock and Mineral Analysis/M. P Gorton
GLG 2715H Advanced Mineralogy/Mineral Chemistry/G. S. Henderson
GLG 3601Y Research Presentation
GLG 3602H Seminars in Geology
GLG 3603Y Research Project
GLG 3604H Selected Topics in Geology
JGN 2607H Advanced Techniques in Hydrogeology/K.WF: Howard

Additional related courses can be found in the Geophysics section of the Graduate Department of Physics course listings.

Geology and Physics (Collaborative Program)

Program Committee

R. C. Bailey, BSc, PhD/Geology and Physics (Director)
J. M. Brenan, BSc, PhD/Geology
J. R. Drummond, BA, MA, DPhil/Physics

Address:
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c/o R. C. Bailey
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E-mail: collab.geophysies@utoronto.ca

The graduate units of Geology and Physics participate in the Collaborative M.Sc. and Ph.D. Programs in Geology and Physics. These programs foster graduate education in those areas of study that overlap traditional departmental boundaries.

Admission Requirements

Candidates 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. Note that M.Sc. students enrolled in Option I in Physics or in the course-only option in Geology are not eligible to enrol in the Collaborative Program. In addition, the applicant 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. Students who successfully complete the requirements of the Collaborative Program will receive the notation “Completed Collaborative Program in Geology and Physics” on their transcript.

Master of Science Program

The MSc. research, thesis, and thesis defence requirements are the same as those of the home department. The M.Sc. will normally require work equivalent to 11 half-courses as follows:

- the core half-course GLG 1101H
- two lecture half-courses in Geology
- two lecture half-courses in Physics
- a supervised research project in the field of geophysics or the overlap area of physics and geology, equivalent to six half-courses.

The supervised research project and associated report or thesis will be completed under the regulations of the home department. Additionally, the student is 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 Program

The Ph.D. 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, with the added stipulation that at least 1 FCE of these be taken in the non-home department. The student’s research supervisor will normally be a faculty member in the student’s home department, unless an explicit exception is approved by both departments.

Germanic Languages and Literatures GER

Graduate Faculty

Full Members
A. Fenner, BA, MA, PhD
W. Goetschel, PhD
M. Hager, BA,MA,Phd
J. Noyes, BA, MA, PhD
(Chair and Coordinator of Graduate Studies)
H. Seliger, PhD
J. Zilcosky, PhD

Members Emeriti
A. P. Dierick, BA, MA, PhD
C. Genno, PhD
W. Hempel, DPhil
H. Mayer, DPhil
D. W. Vincent, BA, MA, PhD
H. E. Wetzel, DPhil

Associate Members
J. N. Retallack, BA, DPhil
A. Shternshis, BA, MA, PhD
S. Soldovieri, BA, MA, PhD

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Web: www.chass.utoronto.ca/german

Candidates are accepted to the graduate program in German Literature, Culture and Theory under the general regulations provided that they also satisfy the Department's requirements stated below.

An applicant from another university 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 to all programs for higher degrees will be based upon the candidate's academic record and upon the evidence of the supporting letters.

The selection of courses for the degrees of Master of Arts and Doctor of Philosophy should be made in consultation with the Coordinator of Graduate Studies of the Department of Germanic Languages and Literatures and must in every case be approved by the Department. All students in their first year of graduate study at the University of Toronto are required to take COL 1000H Faculty Seminar: Theories of Literature and Criticism.

Degree of Master of Arts
Candidates for a one-year M.A. program must have completed the four-year B.A. 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.

Candidates are required to:
1 complete the equivalent of 3.5 full courses, including COL 1000H Faculty Seminar: Theories of Literature and Criticism;
2 pass a German language competence test.

Details of these requirements are found in the departmental handbook.

Degree of Doctor of Philosophy
Admission to the Ph.D. program requires either (a) a four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, that includes at least six full courses (twelve half-courses) in German language, literature, and culture, with an average grade of at least a Bc in the applicant's overall program and of at least an A- in the applicant's German courses, or (b) 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.

A candidate admitted on the basis of a four-year bachelor's degree must take a minimum of seven full courses 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 candidacy of a student who fails to complete at least 3.5 full-course equivalents, with an average of at least an A-, during the first year of the program. The candidate is required to complete the remaining courses required for the degree, with an A- average by the end of the second year.

A candidate admitted on the basis of a master's degree must take a minimum of four full courses including COL 1000H with an average grade of at least an A-. The candidate is required to complete at least 3.5 full-course equivalents by the end of the first year of registration and any remaining courses required for the degree by the end of the second year.

In addition students are required to:
1 give evidence of reading knowledge of French, or, in exceptional circumstances, of another language approved by the Department;
2 pass a general examination in German literature;
3 pass a thesis field review;
4 make an oral presentation of their thesis;
5 submit a thesis on an approved subject and pass an oral examination on this subject.

The selection of courses may include 1.5 full courses in a department other than Germanic Languages and Literatures.

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 of Instruction

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

GER 1470H Goethe in Context/W. Goetschel
GER 1490H Bildung und der Roman der Spataufklarung/J. Noyes
GER 1501H Romanticism/J. Noyes
GER 1510H E.T.A. Hoffmann and the Dialectic of Enlightenment/ J. Noyes
GER 1530H Heine and Critical Theory/ W. Goetschel
GER 1550H Ironic Realism/ W. Goefschel
GER 1580H Vienna at the Turn of the Century/Staff
GER 1615H The Early Theatre of Bertolt Brecht/H. Seliger
GER 1661H Modernism in Context/J. Zilcosky
GER 1690H Theatre in the Weimar Republic/ H. Seliger
GER 1720H Kafka with Deleuze: Toward a "Minor Literature'/lJ. Zilcosky
GER 1730H Travel Writing/J. Zilcosky
GER 1752H Germany's Colonial Imaginary/ J. Noyes
GER 1770H Reviewing the 50s: German Cinemas under Reconstruction/ S. Soldovieri
GER 1771H Topics in German Cinema Studies/S. Soldo vieri
GER 1772H The Politics of the Non-Fiction FilrdA. Fenner
GER 1775H Cinemas of Migration/A. Fenner
GER 1780H Topics in German Visual Culture/ S. Soldovieti
GER 1820H The Learning and Teaching of German/M. Hager
GER 1830H Topics in German Intellectual History/Staff
GER 1860H Introduction to Critical Theory/ Staff
GER 2000H,Y Reading Course in Approved Field/Staff
GER 3000H Current Trends in German Literature/Staff
JGC 1660H Modernism and the Other/ J. Zilcosky
JGC 1750H Modernity and Its Discontents/ W. Goetschel
MST 2010Y Old NorselD. M. McDougall, I. C. McDougall
MST 2015Y Studies in Old Norse Texts/ D. M. McDougall, I. C. McDougall
MST 2019H Icelandic Family Sagas/ A. Orchard

Health Care, Technology and Place (Collaborative Program)

Program Committee

G. R. Fernie, BSc PhD, PEng, CCE/Biomedical Engineering
E. D. Harvey, BA, MA, PhD/English
P. C. Coyte, BA, MA, PhD/Health Policy, Management &, Evaluation (Co-Director)
O. D. Rotstein, MSc, MD, FRCS(C)/Medical Science
P. D. McKeever, BN, MSc(A), PhD/Nursing Science (Co-Director)
L. D. MacKeigan, BScPhm, PhD/Pharmaceutical Sciences
R. E. Gray, BA, MA, PhD/Public Health Sciences
D. T. Reid, BSc(OT), MEd, PhD/Rehabilitation Science
A. Chambon, BA, MA, BSW, PhD/Social Work

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Web: www.hctp.utoronto.ca

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.

The following graduate units participate in the HCTP Collaborative Program: Biomedical Engineering; English; Health Policy, Management and Evaluation; Medical Science; Nursing Science; Pharmaceutical Sciences; Public Health Sciences; Rehabilitation Science; and Social Work. Students must apply to and register in the Ph.D. program of one of the participating graduate units and follow a course of study acceptable to both that unit and the HCTP Collaborative Program.

Application Procedure

Collaborative Programs are administered under the auspices of the School of Graduate Studies. Candidates 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.

1 Applicants must apply to a participating graduate unit and comply with the admission procedures of that unit.

2 Applicants must forward the following to the Program Committee of the HCTP Collaborative Program:

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, which should reflect a minimum 3.5 GPA (A-);

c a resume or curriculum vitae;

d a research plan (maximum 800 words) summarizing research goals and past research experience, the relevance of the HCTP Program to this plan, and justification for the identified HCTP project mentor;

e two confidential letters of recommendation from scholars familiar with the applicant's research background and aptitude for the interdisciplinary study;

f a confidential letter from an HCTP mentor providing:

i formal agreement to participate on the applicant's dissertation committee; and

ii commentary written for reviewers outside the discipline, evaluating the applicant's level of achievement relative to peers in the same discipline, the objectives and methods of the proposed program of research, and the relative merit of such research within the applicant's home discipline.

Note: Students should use copies of official documents (a and b above) for their application to the HCTP Collaborative Program.

Program Requirements

To complete the Health Care, Technology and Place Collaborative Program, students must receive credit for at least one HCTP half-course, participate actively in the monthly seminar series during their involvement with HCTP, and participate in at least one Annual Research Workshop. In addition, students must complete a dissertation under the supervision of a core faculty member in the student's home

department. The dissertation must address the theme of "health care, technology, and place". It is the objective of this Collaborative Program to enrich the Ph.D. experience without unduly extending the duration of students' graduate education. Every student enrolled in the collaborative doctoral program must complete the requirements of the Collaborative 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 and Places: Issues, Concepts, Measures and Policies/P. C. Coyte

JNH 5002H The Body, Health Care, Technology and Place/ P. McKeever, E. D. Harvey, A. Chambon

BME 1456H Changing Health Care Technologies, People and Places/ G. Fernie, A. Jadad, L. MacKeigan

NUR 1031H Technology and Place in Contemporary Health Care Work/G J. Andrews, P. C. Coyte

Note: Students in the Collaborative Program will be encouraged to fulfil departmental course requirements and elective course requirements by enrolling in courses salient to the priorities of HCTP.

Health Policy, Management and Evaluation HAD

Graduate Faculty

Full Members

G. Anderson, BSc, MD, MSc, PhD
G. Baker, BA, MA, PhD
J. M. Barnsley, BSc, MSc, PhD
J. M. Bliss, BA, MA, PhD, FRSC, University Professor
C. Bombardier, MA, MD, FRCP(C)
S. B. Bull, BMath, MMath, PhD
R. W. Cockerill, BA, MA, PhD (Graduate Program Director)
M. M. Cohen, BSc, MHSc, MSc, MD, FRCP(C)
R. Cook, AB, MA, MPA, JD, LLM, JSD
P. C. Coyte, BA, MA, PhD
A. Davis, BA, MD, FCFP, CCFP
R. Deber, SB, SM, PhD
A. Detsky, BS, MD, PhD
S. Donnelly, BSc, MSc, MDCM, FRCP(C)
T. R. Einarson, BScPhm, MEd, MPharm, MSc, PhD
B. Feldman, MSc, FRCPC(R), FRCPC(P), LMCC, MD
R. Glazier, MPH, MD
V. Goel, MD, CM, MSc, SM, FRCP(C)
P. Goering, RN, BSN, MSN, PhD
M. E. Hannah, BSc, MS, MDCM
G. Hawker, BSc, MD, MSc, FRCP(C)
S. Hogg-Johnson, BSc, BMath, MMath, PhD
D. L. Holness, MHSc, MD
A. R. Jadad, MD, PhD, FRCP(C)
M. D. Krahn, BA, MSc, MD, FRCP(C)
A. Laupacis, MSc, MD, FRCPC
L. Lemieux-Charles, BSCN, MSCN, PhD (Chair)
K. J. Leonard, BComm, MBA, PhD
A. G. Logan, MD, FRCP(C)
H. Maclean, BSc, MSc, DipNutr, EdD
J. R. Mclaughlin, MSc,PhD
R. S. McLeod, BM, MD, FRCS(C)
T. Myers, BA, MSc, MSW, PhD
I. Naglie, BSc, MDCM, FRCP(C), ABM
C. D. Naylor, MD, DPhil, FRCP(C)
L. O'Brien-Pallas, BScN, MScN, PhD, National Research Chair in Nursing Human Resources
A. Ohlsson, MSc, MD, FRCP(C)
D. Redelmeier, MS, MD, FRCP(C), De Souza Chair in Trauma Research
P. Rochon, MD, MPH, FRCP(C)
A. M. Sass-Kortsak, BSc MHSc, PhD
T. A. Stukel, PhD, MAF, BSc (Hon), Math (Magna cum laudae)
Y. R. Talbot, MD
I. F. Tannock, BA, MD, PhD, FRCP, The Daniel E. Bersagel Chair in Medical Oncology
T. To, BSc, MS, PhD
J. Tu, MD, PhD, Canada Research Chair
E. Wang, MD, MSc, FRCP(C)
D. Wasylenki, BA, MSc, MD, FRCP(C)
A. P. Williams, PhD
J. G. Wright, MD, MPH, RB Saker Chair of Paediatric Surgical Research
L. T. Young

Members Emeriti

B. M. Dickens, LLB, LLM, PhD, LLD, Dr. William M. School Professor Emeriius in Health Law and Policy
E. Vayda, MD, FRCP(C), FACP

Associate Members

U. Allen, MBBS, MSc, FAAP, FRCP(C)
P. M. Baranek
A. Bayoumi, MSc, MD, FRCPS
D. Beaton, BScOT, MSc, PhD
V. Benk, MSc, MD
B. Berta, PhD
A. Bezjak, BMedSc, MDCM, MSc, FRCP(C)
J. M. Bohnen, MD, FRCSC, FACS
H. S. Boon, BScPhm, PhD
S. Bronskill
D. Brown, AB, PhD
J. L. Browne, BA, MA
A. Cheung, BA, MD, PhD, FRCP(C)
S. Choudhw, BSc, BA, LLB, LLM
R. M. Corbin, BSc, MSc, MA, PhD
A. M. Davis, Bsc(PT), MSc, PhD
C. Dewa, PhD
P. T. Dick, MD, FRCPC
E. E. Etchells, MSc, MD, FRCP(C)
D. S. Feig, BSc, MSc, FRCP(C), MD
C. Flood, BA, LLB, LLM, SJD
R. Fortin, MD, MPH, FRCP(C)
P. Gamble, PhD
W. H. Geerts, BSc, BMedSci, MD, FRCP(C), FCCP
S. Glouberman, BA, PhD
P. J. Goodwin, MSc, MD, FRCP(C), The Marvelle Koffler Chair in Breast Research
D. N. Guerriere, PhD
D. Hodgson, MD, MPH, FRCP(C)
A. Howard, MD, MSc, FRCS(C)
J. E. Hux, BSc, MSc, MD, FRCP
S. Hwang, MD, MPH, FRCP(C)
C. Jackevicius, BSc MSc
S. B. Jaglal, BSc, MSc, PhD
S. Jassal, MD, MB, BCh, BAO(Dist), MRCP(UK), MSc
K. Kapral, MSc, MD, FRCP(C)
H. J. Kreder, MD, FRCS(C), MPH
A. Laporte, PhD
E. Lin, BA, MSc, PhD
A. Maetzel, MD, MSc, PhD
N. N. Mahomed, MD, ScD
M. Mamdani
D. K. Martin, BSc PhD
B. W. McCrindle, MD, MPH, FRCP(C), FACC
J. McGeer, BSc, MSc, MD, FRCP(C)

G. Mitchell, MSc
L. Morrison, MD, FRCPC
M. A. Murray, BA, MA, PhD
D. Naimark, MD, BSc, MSc, FRCP(C)
E. Nauenberg, PhD, MMP/MH
L. J. Nestman, BComm, CA, MHsA
P. O'Connor, MSc, MD
V. Palda, MD, MSc, FRCP(C)
L. Paszat, BA, MD, MS, FRCP(C)
C. E. Preyra, MSC, PhD
G. Pron, BSc, MSc, PhD
M. Rachlis, MD, MSc
D. J. Rath, BScN, MSc
J. Ringash, BSc, MSc, MD, FRCP(C)
P. A. Rosenbaum, MD, FRCP(C)
S. J. ROSS, MBA, PhD, MPhil
C. Sawka, BMSc, MD
S. Sharkey
M. V. Sinnott
T. C. Smith, BSc, MSc
A. Steinhart, BA, MD, FRCP(C), MSc
T. Sullivan, BSc, MA, PhD
J. Szold
F. Teare, DVM, MSc, PhD
G. J. Tolomiczenko, MPH, PhD, CPsych
W. Ungar, BA, MSC, PhD
D. R. Urbach, MD, MSc, FRCSC
S. Vohra
S. L. WahlSley, MD, FRCP(C)
H. E. Whyte, MSc, MD, FRCP, FRCP(C)
J. Willison, BSc,, MSc, ScDesign, ScD
C. Windrim, MSc, MB, FRCS(C)
W. Wobeser, MD, FRCP(C)
R. Wong, MD
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D. Zakus, BSc, MES, MSc, PhD

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Application
A complete description of all programs, degree requirements, courses, faculty research interests, and policies is available on the Web site www.utoronto.ca/hpme. Application forms and other required forms are also available on this site.

Students are admitted under the general regulations of the School of Graduate Studies. Please note the application deadlines.

November 15
M.Sc. in Clinical Epidemiology and Health Care Research
M.Sc. in Health Administration
Ph.D.

February 1
M.H.Sc. in Health Administration
M.H.Sc. in Health Administration/M.S.W. joint degree program

Degree of Master of Health Science
The M.H.Sc. degree program is for health managers and professionals who wish to acquire a professional graduate education in health administration. The program is offered in a modular format that concentrates class time into Wednesday evening and all day Thursday, Friday, and Saturday, five times per session. The program consists of five consecutive sessions starting in September each year.

Admission Requirements
1 Applicants normally require 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
2 Candidates are strongly advised to have some prior preparation in quantitative courses such as statistics, accounting, and economics.
3 Relevant work and/or field experience is required.

Program Requirements
1 Completion of 10 full-course equivalents of which 8.5 are required subjects and which includes a minimum of 1 full-course equivalent in a field placement.
2 Degree requirements are normally completed within two years.

Courses of Instruction

All courses are offered in modular format unless marked otherwise.

Required

HAD 5010H Canada's Health System and Health Policy: Part I/A. P. M. Williams, R. Deber
HAD 5020H Canada's Health System and Health Policy: Part II/R. Deber, A. P. M. Williams
HAD 5030H Methods and Cases in Health Policy/A. Brown
HAD 5711H Strategic Management for Health Service Organizations/ W. Berta
HAD 5713H Introduction to Health Information Systems/ J. M. Barnsley
HAD 5714H Strategic Uses of Health Information/N. Ladak
HAD 5721H Strategic Management of Quality and Organizational Behaviour in Health Services Organizations/ G. R. Baker
HAD 5723H Health Services Accounting/ W. Wodchis
HAD 5724H Quantitative Methods for Health Services Management and Policy/R. Cockerill
HAD 5725H Health Economics/C. Dewa
HAD 5731H Advanced Cases in Health Management/G R. Baker
HAD 5733H Health Services Finance/ W. Wodchis
HAD 5741H Health Law/S. Grauer, M. Thomson
HAD 5761H Decision Support Systems in Health CarelK. J. Leonard
HAD 5769H Human Resources Management in the Health FieldlL. Lemieux-Charles
HAD 5770H Program Planning and Evaluation/R. C. Cockerill
HAD 6010Y Required M.H.Sc. Practicum (CrediVNo Credit)/T: Smith
HAD 6011H Optional Practicum Extension (Credit/No Credit)/T: Smith

Elective (non-modular electives may be taken subject to program approval)

HAD 5765H Case Studies in Health Policy/ R. B. Deber
HAD 5767H Health Services Marketing/ J. Szold
HAD 5774H Comparative Health Care Systems/D. Zakus
HAD 5775H Competition, Cooperation and Strategy in Health Care/ A. Brown

M.H.Sc. Health Administration/M.S.W. Joint Degree Program

The M.H.Sc. Health Administration/M.S.W. Joint Degree Program allows students with a strong interest in both social work and health/ social sciences management the opportunity to engage in an integrated program of study leading to the concurrent receipt of the M.H.Sc. and M.S.W. degrees.

There are two full-time streams of study: a three-year program for students admitted with a four-year undergraduate degree and a two-year program for students with a Bachelor in Social Work.

Candidates for the M.H.Sc. Health Administration/M.S.W. Joint Degree Program must apply to, and be admitted to both faculties; therefore, candidates must meet the requirements for admission to both. Note however, that the deadline for receipt of applications to the M.H.Sc. program is February 1 and the deadline for the M.S.W. Program is December 1. Further details can be obtained from our Web site at www.utoronto.ca/hpme/.

Combined Master of Nursing/Master of Health Science (Health Administration) Program

At press time, this program was pending final approval. Please contact the Department for details.

The Combined M.N./M.H.Sc. (Health Administration) 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 M.N. and M.H.Sc. (Health Administration) degrees within 2.5 years of full-time study.

During the first year of the program, students enrol in the Faculty of Nursing and complete eight half-courses for the M.N. degree. During the second year, students enrol in the Department of Health Policy, Management and Evaluation (HPME) and complete 11 half-courses towards the M.H.Sc. (Health Administration) degree plus two electives that can be taken from either degree program. In the third year, two-half courses are taken in HPME.

Admission Requirements

Admission to the combined program is conditional upon independent admission to each of the participating graduate units. Candidates will normally be required to complete separate application forms on a concurrent basis and pay the application fees for admission to the M.N.

Program and the M.H.Sc. (Health Administration) Program.

Candidates 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 M.N./M.H.Sc. (Health Administration) Program. Candidates must:

1 be accepted under the general regulations of the School of Graduate Studies. Meeting the minimum requirements does not ensure admission.
2 hold a University of Toronto B.Sc. degree in Nursing or a degree from an equivalent program in a recognized university.
3 have obtained a B+ standing over the last two years of undergraduate study. The candidate is expected to have good academic standing in non-nursing as well as nursing subjects.
4 have successfully completed an introductory course in statistics prior to admission.
5 have at least three years of work experience in the health care field.

Program Requirements

The M.N. component of the Combined M.N./M.H.Sc. (Health Administration) Program comprises eight required half-courses. The M.H.Sc. (Health Administration) component comprises 13 required half-courses. In addition, the Combined Program requires two elective half-courses that can be taken from either the M.H.Sc. or M.N. course offerings.

Degree of Master of Science

The Department of Health Policy, Management and Evaluation offers two programs leading to the Master of Science:

1 Clinical Epidemiology and Health Care Research
2 Health Administration

Clinical Epidemiology and Health Care Research

The M.Sc. degree program in Clinical Epidemiology and Health Care Research is undertaken by health professionals interested in research and academic careers in health care.

Two streams of training are available within the M.Sc. degree program in Clinical Epidemiology and Health Care Research—a non-thesis, course-only stream (ten half-courses including completion of at least one research practicum) and a thesis-based stream (six half-courses and a thesis).

Admission Requirements

Applicants normally require a B+ average or higher in the last two years of a four-year undergraduate degree in a health profession (e.g., M.D., B.Sc.N., B.Sc.O.T., B.Sc.P.T., D.D.M., M.Sc.N.) from a recognized university.

Program Requirements

Thesis MSc.

1 Completion of all degree requirements within five years.
2 Writing of a thesis under the supervision of a thesis committee (supervisor and at least one additional faculty member) and its defence before an examination committee appointed by the Graduate Department of Health Policy, Management and Evaluation.
3 Completion of six half-courses; three required (HAD5307H, HAD 5301H or equivalent, and one of HAD 5303H, HAD 5304H, HAD 5306H or HAD 5309H) and three optional.

Non-Thesis M.Sc.

1 Completion of all degree requirements within five years.
2 Completion of ten half-courses; four required (HAD 5307H, HAD 5301H or equivalent, HAD 6360H, and one of HAD 5303H, HAD 5304H or HAD 5309H), and six optional.

Courses of Instruction

HAD 5301H Introduction to Clinical Epidemiology and Health Care Research/ D. Urbach, J. Ringash
HAD 5302H Measurement in Clinical Research/A. Davis, D. Beaton
HAD 5303H Controlled Clinical Trials/ H. Steinhart
HAD 5304H Clinical Decision Making and Cost Effectiveness/A. Bayoumi
HAD 5305H Evidence-Based Guidelined D. Feig, V: Palda
HAD 5306H Introduction to Health Care Research Methodology/E.Lin, J. Hux
HAD 5307H Introduction to Applied Biostatistics/A. *Kiss*
HAD 5308H Systematic Review of Randomized Controlled Trials/ P. Shah
HAD 5309H Non-Experimental Design for the Clinical Researcher/G. Hawker
HAD 5310H Pragmatic Issues in Conduct of Controlled Trials/K. Murphy
HAD 5312H Decision Modelling of Clinical Policy and Economic Evaluation/ M. Krahn

HAD 5730H Economic Evaluation Methods for Health Service Research/ A. Laporte
HAD 5760H Advanced Health Economics and Policy Analysis/P.C Coyte, A. Laporte
HAD 5763H Methodological Issues in the Description and Analysis of Health Care Performance/ G. Anderson
HAD 6360H Required Research Practicum in Clinical Epidemiology (Credit/No Credit)
HAD 6361H Optional Research Practicum in Clinical Epidemiology (Credit/No Credit)
HAD 7002H Advanced Design and Analysis Issues in Clinical Trials/ B. Feldman
JNH 5000H Measurement of Patients' Preferences in Health Care Decision Making/ H. Llewellyn- Thomas
MSC1060H Biostatistics for Health Sciences/ P. Corey

Health Administration

This M.Sc. degree program is undertaken by students interested in research and academic careers in health care research.

Admission Requirements

Applicants normally require 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.

Program Requirements

1 Completion of all degree requirements within five years.
2 The writing of a thesis under the supervision of a thesis committee (supervisor and at least one additional faculty member) and its defence before an examination committee appointed by the Graduate Department of Health Policy, Management and Evaluation.
3 The completion of six half-courses; two of which must be research methodology courses and two of which must be in an area of specialization.

Degree of Doctor of Philosophy

The Ph.D. degree program is undertaken by students interested in research and academic careers in health care research. Current research areas include outcomes and evaluation, health policy, health services organization and management, eHealth and information management, and clinical epidemiology and health care research.

Admission Requirements

Candidates applying to the Ph.D. program are normally expected to have completed a M.A. or M.Sc. (with a thesis) and to provide satisfactory references pertaining to their academic and research abilities. Upon the recommendation of the appropriate Health Policy, Management and Evaluation committee, outstanding students with a non-thesis master's degree may be admitted to the Ph.D. program if they have 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 M.Sc. program and may petition to transfer into the Ph.D. program within 24 months of their first registration. Transfer is contingent upon successful completion of master's course work and preparation and defence of a Ph.D. thesis proposal.

Program Requirements

Full Time
1 Full time registration (fall, spring, summer sessions) for the first four years of the doctoral program.
2 Completion of all degree requirements within six years from first registration in the program. Thereafter, candidates may apply for a maximum of two one-year extensions.
3 Completion of a comprehensive course in the area of specialization.
4 Completion of 10 half-courses.
5 Writing of a Ph.D. thesis under the supervision of an approved thesis committee (supervisor plus two additional faculty members).
6 Oral defence of the thesis before an examination committee appointed by the School of Graduate Studies.

Flexible Time

With the approval of the graduate chair, some applicants may be admitted to a flexible-time Ph.D. program. This program will benefit mature students with career and/or familial obligations. The degree requirements for the flexible-time Ph.D. program are identical to those listed above for the full time Ph.D. program; however, students have up to eight years to complete the program. Students are required to register full time for the first four years of their program; thereafter, they may register part time.

Courses of Instruction

In addition to the courses listed under degree of Master of Science (Clinical Epidemiology and Health Care Research), the following courses:

HAD 5011H Canada's Health Care System (Doctoral Stream)/A.P.M. Williams

HAD 5311H° Comprehensive/Synthesis-Clinical Epidemiology and Health Care Research (Credit/No Credit)/G. Hawker

HAD 5726H Design and Evaluation in eHealth Innovation and Information/ K. Leonard

HAD 5727H Knowledge Transfer and Exchange/P. Goering

HAD 5728H Performance Measurement in Health Care: Theory and Application/Staff

HAD 5762H° Seminar Series (Credit/No Credit)

HAD 5768H International Perspectives on Health Services Management D. Zakus

HAD 5771H Resource Allocation Ethics/ O. Martin

HAD 5772H Intermediate Statistics for Health Services Researchers/Staff

HAD 5773H Introduction to Theories of Organizational Behaviour and Applications to the Health Care Sector/L. Lemieux-Charles

HAD 6760Y Introduction to Health Services Research Theory and Methods/ J. Barnsley

HAD 6761H Health Services Outcomes and Evaluation Comprehensive Course/Staff

HAD 6762H Health Services Organization and Management Comprehensive Course/L. Lemieux-Charles

HAD 6763H Health Policy Comprehensive Course/A. P. M. Williams, R. Deber

MSC 1060H Biostatistics for Health Scientists/ P. Corey

JNH 5001H Health Care Settings: Issues, Concepts, Measures, and Policies/P. C. Coyte, *P.* McKeever

Cross-listed Courses

These courses are limited to certain program students in Health Policy, Management and Evaluation. Please check the Web site www.utoronto.ca/hpme/

BME 1456H Changing Health Care Technologies, People, and Places/ G. Fernie

HSR 1000H Health Services Research Practicum/R. Cockerill

HSR 1001H Introduction to Qualitative Methods for Health Services and Policy Research/ N. Jacobson

HSR 1002H Health Services and Policy Research Summer Institute/ R. Cockerill

JCV 3060H Advanced Topics in Cardiovascular Sciences—Molecular Biology and Heart Signal Transduction/ R. Tsushima

JCV 3061H Advanced Topics in Cardiovascular Sciences—Hormones/ C. Wittnich

JCV 3062H Advanced Topics in Cardiovascular Sciences—Heart Function/C. Wittnich

JCV 3063H Advanced Topics in Cardiovascular Sciences—Vascular/ S. Heximer, C. Wittnich

JHM 1000H Issue Analysis in Interdisciplinary, International Health Research/ Y. Talbot, N. Byrne

LAW465H Conflicts of Interest in Medicine: Evidence, Public Policy, and the Law/S. Choudhry

LAW404H Health System Law and Policy/ C. Flood

Collaborative Programs

Students in the M.H.Sc., M.Sc., and Ph.D. programs in the Graduate Department of Health Policy, Management and Evaluation may also participate in a range of collaborative programs:

1 Aging and the Life Course
2 Bioethics
3 Cardiovascular Sciences
4 Health Care, Technology and Place
5 Health Services and Policy Research
6 International Relations
7 Women's Studies

For more details see separate listings in the calendar.

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

Health Services and Policy Research (Collaborative Program)

Program Committee

P. C. Coyte, BA, MA, PhD/Health Policy, Management & Evaluation

C. Regehr, BA, MSW, PhD, Sandra Rotman Chair in Social Work/Social Work

L. O'Brien-Pallas, BScN, MScN, PhD, National Research Chair in Nursing Human Resources/Nursing Science

S. B. Jaglal, BSc, MSc, PhD/Rehabilitation Science

B. J. Harvey, BA, MD, MSc, FRCP(C), FACPM, PhD/ Public Health Sciences

P. Goering, RN, BSN, MSN, PhD/Nursing Science

D. M. Doran, RN, BA, MHSc, PhD/Nursing Science

R. W. Cockerill, BA, MA, PhD/Health Policy, Management & Evaluation (Director)

H. S. Boon, BScPhm, PhD/Pharmaceutical Sciences

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Nature of Collaborative Program

The Collaborative Program in Health Services and Policy Research is part of the Ontario Training Centre in Health Services and Policy Research (OTC). The OTC is a consortium of six Ontario Universities seeking to improve graduate education for students who are interested in becoming health services and policy researchers. The consortium includes Lakehead, Laurentian, McMaster and York Universities as well as the Universities of Ottawa and Toronto. Participating graduate units at the University of Toronto include Health Policy, Management and Evaluation; Nursing Science: Pharmaceutical Sciences: Public Health Sciences; Rehabilitation Science; and Social Work.

Graduates of the Collaborative Program must demonstrate knowledge of Canada's health care system, health services and policy research tools, and theories of population health, knowledge production and knowledge transfer by completing relevant courses required by the Collaborative Program as well as by the home unit. Students must complete a dissertation under the supervision of a core faculty member of the Collaborative Program in the student's home department that addresses 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:

1 complete a practicum; and
2 participate in one Summer Institute hosted by the OTC.

Application Procedures

Candidates 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 follow a program of study acceptable to both the participating unit and the Collaborative Program. Masters and doctoral candidates are accepted under the School of Graduate Studies general regulations and the specific criteria of the participating unit. Admission to the Collaborative Program will be made by the Program's Admissions Committee comprising the Collaborative Program Director and a representative from each of the participating units. Please note that students who complete the Collaborative Program at the masters level are not eligible to participate at the Ph.D. level.

Masters Degree

Admission Requirements

Applicants to the Collaborative Program are required to demonstrate:

1 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, and
2 an interest in health services and policy research outlined in an autobiographical letter including their reasons for becoming a health services or policy researcher.

Program Requirements

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. All 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.

Courses of Instruction

1 Courses offered by the University of Toronto departments involved in the OTC are listed in their separate calendar entries: Health Policy, Management and Evaluation; 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 policy project and effectively communicating the results of that research to stakeholders.

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.

Doctoral Degree

Admission Requirements

Applicants to the Collaborative Program are required to:

1 demonstrate academic excellence in completed courses (B+ average in graduate courses), scholarships and academic awards received;

2 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);

3 outline career plans (in an autobiographical letter including their reasons for becoming a health services researcher and their career plans); and

4 propose a plan of study in the Collaborative Program.

Program Requirements

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. All 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.

Courses of Instruction

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; Nursing Science; Pharmaceutical Sciences: Public Health Sciences; Rehabilitation Science; and Social Work.

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History HIS

Graduate Faculty

Full Members

L. J. Abray, BA, MA, MPh, PhD (Chair)
S. Aster, BA, MA, PhD
K. R. Bartlett, BA, MA, PhD
D. E. Bender, BA, PHD
R. Birla, BA, MA, MPhil, PhD
P. H. Blanchard, BA, PhD
J. M. Bliss, BA, MA, PhD, FRSC, University Professor
R. Bothwell, BA, AM, PhD, FRSC
T. J. Brook, BA, AM, PhD
E. Brown, BA, MPhil, MA, PhD
J. S. Brownlee, BA, MA, MPh
C. C. Chin, BA, MA, PhD
I. Cochelin, BSc, BA, MA, DEA, PhD
J. Dent, BA, MA, PhD
E. W. Dowler, BA, AM, PhD
M. Eksteins, BA, BPhil, DPhil
N. C. Everett, BA, PhD
M. Gervers, AB, MA, PhD
J. W. Goering, BA, MAR, MA, MSL, PhD
A. R. Greer, BA, MA, PhD
B.S. Hall, BA, PhD
E. B. Halpern, BA, MA, PhD
S. Hawkins, BA, MA, PhD, FCCS
D. C. Higgs, BA, MA, PhD
A. D. Hood, BA, MA, PhD
F. lacovetta, BA, MA, PhD
J. N. Ingham, BA, MA, PhD
J. L. Jenkins, BA, MA, PhD
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R. A. Kazal
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B. Kidd, BA, AM, MA, PhD
J. Kivimae, BA, PhD
T. Lahusen, BA, MA, PhD
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L. Loeb, BA, MMSt, PhD
L. S. MacDowell, BA, MSc, PhD
M. O. MacMillan, BA, BPhil. DPhil
P. R. Magocsi, AB, MA, MA, PhD, FRSC
M. L. Marrese, BA, MA, PhD
M. R. Marrus, BA, MA, PhD, FRHistS, FRSC, Chancellor Rose and Ray Wolfe Professor of Holocaust Studies
M. McGowan, BA, MA, PhD
C. T. Mclntire, BA, MA, MDiv, PhD
M. D. Meyerson, BA, MA, PhD
K. R. Mills, BA, MA, DPhil
C. L. Morgan, BA, MA, PhD
J. Mori, BA, DPhil
D. P. Morton. BA. MA. PhD. FRSC. OC
C. M. Murphy, BA, PhD
A. C. Murray, BA, PhD
N. B. Musisi, PhD
M. J. Newton, BA, MA, DPhil
J. Noel, BA,MA,PhD
S.G. Penfold, EA, MA, PhD
D. J. Penslar, BA, MA, PhD
J. R. Phillips, MA, LLB, PhD
R. W. Pruessen, BA, MA, PhD
I. W. Radforth, BA, MA, PhD
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I. R. Robertson, BA, MA, PhD
S. Rockel, BA, MA, PhD
A. Rossos, BA, MA, PhD
P. Rutherford, BA, MA, PhD
A. Schmid, BA, MA, PhD
E. L. Shorter, BA, MA, PhD, FRSC
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A. I. Silver, BA, MA, PhD
D. Smyth, BA, PhD, FRHistS
M. Tavakoli-Targhi, BA, MA, PhD
C. N. Terpstra, BA, MA, PhD
B. Todd, BA, MA, PhD
N. T. Tran, BA, MA, PhD
H. M. Troper, BA, MA, PhD
S. M. Van Kirk, BA, MA, PhD
L. A. Viola, BA, MA, PhD
W. K. Wark, BA, MA, PhD
M. S. Wayne, BA, PhD
D. E. Williams, BA,MA,PhD
D. A. Wilson, BA, MA, PhD, FRHS
R. Wittmann, Ba,Ma,Phd
P. J. Wrobel, MA, PhD

Members Emeriti

R. D. Accinelli, BA, MA, PhD
J. M. Beattie, BS, MA, PhD, FRSC, University Professor Emeritus
C. C. Berger, BA, MA, PhD, FRSC
W. C. Berman, BA, MA, PhD
R. C. Brown, BA, MA, PhD FRSC
W. J. Callahan, AB, MA, PhD
R. Cook, BA, MA, PhD, OC, FRSC
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M. A. Klein, BS, MA, PhD
J. Kornberg, BA, PhD
C. La Vigna, BA, PhD

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J. L. Pearl, EA, MA, PhD
D. L. Aaby, BA, PhD
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A. N. Sheps, EA, MA, PhD
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Admission
In addition to the School of Graduate Studies application form, applicants must submit an information form, three letters of recommendation, and a statement of interest. A short writing sample or course paper is welcomed. Complete application packages may be downloaded from the History Department's Web site. The closing date for applications to the M.A. and Ph.D. programs is January 15. Later applications will be considered only in exceptional circumstances.

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). Applicants taking the paper-based TOEFL exam must achieve a minimum score of 600 and 5.0 on the TWE. Applicants taking.the computer-based TOEFL exam must achieve a minimum score of 250 and 5 on the essay rating component.

Degree Programs
The Department offers both the M.A. and Ph.D. degrees in history.

Candidates from other universities will have their academic records equated as far as is practicable with the required standards set out below.

Degree of Master of Arts
For admission to the M.A., students must hold a four-year B.A. degree from this university or a similar program elsewhere, must have attained at least a B+ standing, and must have successfully completed at least six full courses in history. Candidates without adequate history training may be required to complete an appropriate number of undergraduate history courses before being considered for admission. In rare cases, a candidate may be admitted to the M.A. program but will be required to do one or two additional courses.

Students usually complete the M.A. by course work and the HIS 2000Y paper. Some students may elect to complete the M.A. by course work and thesis. All M.A. candidates are required to take HIS 1997H The Practice of History. Those electing the thesis option will take the equivalent of three additional half-courses and present an M.A. thesis. Those selecting the course option will take the equivalent of four additional half-courses and the M.A. essay. Up to one full-course equivalent may be taken outside the History Department with the approval of the Coordinator of Graduate Studies.

M.A. candidates must achieve at least an overall B average in their courses to maintain standing. They must also pass the required reading examination in a language other than English.

Full-time M.A. students in the course option are expected to complete all degree requirements within 12 months of entering the program. The thesis M.A. might take longer than the course M.A.; the thesis must be presented within five years of entering the program. It is possible to do the M.A. on a part-time basis within a maximum of five years.

Degree of Doctor of Philosophy
To be considered for admission to the Ph.D. program, candidates normally hold the M.A. degree in history, or its equivalent, and must satisfy the Department of their ability to do independent research at an advanced level. Applicants are expected to have achieved grades averaging A- or better in their most recent degree. Exceptional students may be admitted directly to the Ph.D. program from the B.A.

Students entering the Ph.D. program with an M.A. will complete four half-courses and will be expected to maintain a B+ average throughout their course work. Students from the B.A. level will normally be expected to complete four additional half-courses for a total of eight in their program. One of these courses should be HIS 1997H The Practice of History. These

students will be expected to maintain an A-average in their first four half-courses in order to continue in the program.

Beyond course work, there are four main requirements in the Ph.D. program: fulfillment of the residence requirement, successful completion of comprehensive examinations in three fields of history, fulfillment of language requirements that vary with the candidate's major area of study, and the writing and successful defence of a thesis. Although it is possible to complete these requirements within four years, in most cases it will take longer.

The History Department requires its Ph.D. candidates to be in residence until they have passed their field examinations but no longer than a period of two years. To fulfill this requirement a student 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.

At the beginning of their programs, candidates, in consultation with the Coordinator of Graduate Studies, will decide upon their fields and be assigned advisors. 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. Candidates are required to take their field examinations by the spring of their second year in the program, but they are strongly advised to take them as soon as possible after the completion of their course work. While examinations are normally held in October, January, and March, candidates may take them at other times with the permission of their field supervisors. Examinations cannot be postponed beyond the spring of the second year without permission of the Coordinator of Graduate Studies. The Department's graduate handbook, *Graduate Studies in History,* contains a list of the fields offered.

If not already so qualified, a candidate must qualify in one language other than English by the beginning of the second year and may be asked to qualify in other program-related languages.

When all of the above requirements are completed, the candidate will proceed to the writing of the Ph.D. thesis. The thesis must be a piece of original scholarship, approximately 350 pages or 90,000 words in length, exclusive of notes and bibliography. Thesis preparation is guided by a committee consisting of the major supervisor and two other faculty members. The thesis must be presented within six years of enrolment in the Ph.D. program.

Collaborative Programs

The Department of History participates in the following collaborative programs:

- Asia-Pacific Studies
- Book History and Print Culture
- Editing Medieval Texts
- Ethnic and Pluralism Studies
- International Relations
- Jewish Studies
- South Asian Studies
- Women's Studies

Each of these programs has its own entry in this calendar; interested students should refer to these entries.

Courses of Instruction

Not all courses are offered every year. Please consult the Department's list of current course offerings.

HIS 1000H	Historiography/C. T. McIntire
HIS 1005H	Foucault, History and the Pursuit of Truth/M. Price
HIS 1006H	Historiography "From Below": Comparative and Critical Perspectives/M. Kasturi, D. Williams
HIS 1007H	The Sound of History/A. Blake
HIS 1009H	Colonial Governmentality: Governing Economy and Culture/ R. Birla
HIS 1010H	History by Numbers: The Uses and Misuses of Quantitative Evidence in History/R. Johnson
HIS 1015H	Colonial Encounters and Postcolonial Theory/S. Hawkins
HIS 1016H	Readings in the History of Gender and Sexuality/€. Brown, M. Murphy
HIS 1020H	Cultural Theory/Cultural History/ P. Rutherford
HIS 1025H	Explorations in Comparative History/R. Halpern
HIS 1026H	Modernity and Its Others: History and Postcolonial (joint graduate/ undergraduate) R. Birla
HIS 1030H	Oral History: Theory, Methods, Practice/R. Halpern
HIS 1035H	Historiography and Film Studies (joint graduate/undergraduate)/ C. Keil
HIS 1036H	Early Cinema/C. Keil
HIS 1101H	Race and Gender in the Northern Colonies of North America/J. Noel

HIS 1104H Natives and Empires: Colonial History of the Americas, 1492-1800/A. Greer, K. Mills
HIS 1106H Topics in Canadian Social History//. Radforth
HIS 1107H Religion, Culture and Society in Canada (joint graduate/undergraduate)/M. McGowan
HIS 1108H Culture, Nationality, and the State in CanadaA. Silver
HIS 1109H Readings in Canadian History/ S. G. Penfold, A. Silver
HIS 1110H French-English Relations in Canada (joint graduate/undergraduate)/A. Silver
HIS 1111H Topics in North American Environmental History (joint graduate/undergraduate)/ L. MacDowell
HIS 1136H The Canadian Political Tradition: From Macdonald to Chretien (joint graduate/undergraduate)/ M. Bliss
HIS 1142Y Canadian Foreign Relations, 1940-1984 (joint graduate/undergraduate)/R. Bothwell
HIS 1164H Irish Migration to Canada: Sources and Methods/ M. McGowan
HIS 1170H History of Health Care in Canada (joint graduate/undergraduate)/ M. Bliss
HIS 1201H The Materials of Medieval History (Credit/no Credit)/J. Goering
HIS 1207H Pastoralia: The Medieval History of Pastoral Care/J. Goering
HIS 1208H Writings of Robert Grosseteste/ J. Goering
HIS 1209H The Anglo-Saxon/A. Murray
HIS 1211H History and Historiography in the Golden Legend (joint graduate/ undergraduate)/J. Goering
HIS 1213H Medieval Monasticism (joint graduate/undergraduate)/ I. Cochelin
HIS 1214H The Merovingians/M. Murray
HIS 1215H Social Change in Medieval England, 1154-1279/M. Gewers
HIS 1218H The Mediaeval Church (joint graduate/undergraduate)/ G. Silano
HIS 1220H Mediaeval Canon Law (joint graduate/undergraduate)/ G. Silano
HIS 1221H Topics in Early Modern European Social History/N. Terpstra
HIS 1222H Ritual in Renaissance and Early Modern Europe/N. Terpstra
HIS 1223H Humanism and the Renaissance/ K. Bartlett
HIS 1230H The Sexes in the Western World, 1450-1650/J. Abray
HIS 1231H Topics in French History/Staff
HIS 1232H European Colonialism, 1870-1970: A Comparative History/ E. Jennings
HIS 1245H Women in Early Modern Europe/ B. Todd
HIS 1267H Nationalism/D. Penslar
HIS 1269H The Social History of Medicine in the Nineteenth and Twentieth Centuries (joint graduate/undergraduate)/E. Shorter
HIS 1270H History of Psychiatry and Psychiatric Illness (joint graduate/undergraduate)/E Shorter
HIS 1272H Topics in Twentieth-Century European History/J. Jenkins
HIS 1274H The Nazis, Occupied Europe, and the Jews/M. Marrus
HIS 1275Y Imperial Germany, 1871-1918/ J. Retallack
HIS 1276H The Third Reich and the Holocaust/R. Wittmann
HIS 1277H Topics in Jewish History/ D. Penslar
HIS 1279H World War II in East Central Europe (joint graduate/undergraduate)/P. Wróbel
HIS 1280Y History and Soviet Cinema (joint graduate/undergraduate)/ T. Lahusen
HIS 1281H History of Real Socialism/ T. Lahusen
HIS 1282H Totalitarian Culture/T. Lahusen
HIS 1283H War, Plague and Hunger in the Early Modern Baltic (joint graduate/undergraduate)/J. Kivimäe
HIS 1284H The Baltic World/J. Kivimae
HIS 1285Y The Ukrainian National Revival (joint graduate/undergraduate)/ P. Magocsi
HIS 1287H Polish Jews Since the Partitions of Poland (joint graduate/undergraduate)/ P. Wrobel
HIS 1288H The Age of Experiments (joint graduate/undergraduate)/ P. Wrobel
HIS 1291H Topics in Russian and Soviet Social History (joint graduate/ undergraduate)/R. Johnson
HIS 1292H The Russian Revolution (joint graduate/undergraduate)/ R. Johnson
HIS 1293Y Kievan Rus' (joint graduate/undergraduate)/P. Magocsi

HIS 1294H In the Soviet Archives: Text and History (joint graduate/undergraduate)/L. Hola
HIS 1295H Soviet History Seminar/L. Vioia
HIS 1296H Stalinism and After: Beyond Cold War History/L. Viola
HIS 1297H Problems of National Survival in Eastern Europe Since 1848 (joint graduate/undergraduate)/ A. Rossos
HIS 1298H Problems in the Social and Cultural History of Imperial Russia/M. Marrese
HIS 1299H Topics in Russian Intellectual History/W. Dowler
HIS 1411H Theory and Practice in Early Modern British History/J. Mori
HIS 1435H Studies in Victorian Society/ L. Loeb
HIS 1440H Irish Nationalism in Canada and the United States (joint graduate/undergraduate)/D. Wilson
HIS 1520H Readings in Visual Culture and American History/E. Brown
HIS 1521H Time and Place: Cultural Studies of Place in America/A. Blake
HIS 1525H Topics in the History of the American South/M. Wayne
HIS 1526H The Black Experience in America/ M. Wayne
HIS 1530H Readings in 20th Century American Foreign Policy/C. Chin
HIS 1531H American Political History Since 1877/R. Kaza
HIS 1532H American Foreign Policy in the Cold War/R. Pruessen
HIS 1533H Gender and International Relations (joint graduate/undergraduate)/C. Chin
HIS 1540H Cultures of American Capitalism/ D. Bender
HIS 1543H Topics in Material Culture/ A. Hood
HIS 1545H Race, Segregation and Protest: South Africa and the United States/R. Halpern
HIS 1550H Atlantic Labour Migrations/ R. Halpern
HIS 1630H Appeasement/S. Aster
HIS 1631H Intelligence and International Relations/ W. Wark
HIS 1632H International Relations Field Seminar/ W. Walker
HIS 1635H The Great Powers and the Spanish Civil War, 1936-1939/ D. Smyth
HIS 1637H Culture and the Cold War (joint graduate/undergraduate)/ W. Wark
HIS 1665H Gender and History in Colonial South Asia/M. Kasturi
HIS 1670Y Topics in Late Imperial and Modern Chinese History (joint graduate/undergraduate)/M. Szonyi
HIS 1674Y Japanese Political Thought, 1868-Present (joint graduate/ undergraduate)/J. Brownlee
HIS 1675Y State, Society, and Economy in the Late Imperial China(joint graduate/undergraduate)/ T. Brook
HIS 1676H Collaboratior/T. Brook
HIS 1701H Religion, Society and Empire in the Colonial Spanish Americas, 1492-1800/K. Mills
HIS 1702H Topics in the Social History Colonial Spanish America/ P. Blanchard
HIS 1704H Latin America in the Age of Independence/P. Blanchard
HIS 1705H Africa: Writing, Colonialism and Memory/S. Hawkins
HIS 1706H Decolonizing Research Methodologies/S. Hawkins, N. Musisi
HIS 1707H Topics in African History/ S. Rockel
HIS 1708H Labour in the Age of Imperialism/ S. Rockel
HIS 1709H Conversion and Christianities in the Early Modern Spanish World(joint graduate/undergraduate)/K. Mills
HIS 1710H Comparative Slavery in the Caribbean and Latin America/ P. Blanchard, M. Newton
HIS 1997H The Practice of History (Credit/No Credit)/Staff
HIS 1998H,Y Reading Course
HIS 1999H,Y Reading Course
HIS 2000Y° Directed Research
JHP 1289Y Twentieth Century Ukraine (joint graduate/undergraduate)/ P. Magocsi
JHP 2231H The History and Philosophy of International Relations Thought/ Staff
JHP 2301Y Linguistic and Cultural Minorities in Europe (joint graduate/undergraduate)/ P. Magocsi

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

Courses in Other Departments Taught by History Faculty

COL 5027H Memory, Trauma, and History/ T. Lahusen
COL 5044H A Journey from Petersbury to Los Angeles/T. Lahusen
MST 1110H Diplomatics and Diplomatic Editing/M. Meyerson
MST 1120H Literacy in Early Medieval Europe/N. Everett
MST 3201H Medieval Social History, 1000-1500/I. Cochelin, M. Meyerson
MST 3205Y Violence in Medieval Society (joint graduate/undergraduate)/ M. Meyerson
MST 3225Y Jews and Christians in Medieval and Renaissance Europe (joint graduate/undergraduate)/ M. Meyerson
MST 3242H The Carolingians and the Birth of Europe/N. Everett
MST 3243H Dark Age Italy/N. Everett
MST 3265H Hagiographies//.Cochelin

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.

History and Philosophy of Science and Technology HPS

Graduate Faculty

Full Members

B. S. Baigrie, BA, MA, PhD
J. R. Brown, BA, MA, PhD
A. Chakravartty, BSc, MA, BPhil, PhD
M. Chazan, BA, MA, PhD
R. De Sousa, BA, PhD
c. G. Fraser, BA, MA, PhD
Y. Gingras, BSc, MSc, PhD
B.S. Hall, BA, PhD
(Coordinator of Graduate Studies)
S. Hong, BA, PhD
A. R. Jones, BA, PhD, FRSC
N. Krementsov, Candidate of Sciences
J. Langins, BEng, MA, MEng, PhD
T. H. Levere, BA, MA, DPhil, DLitt, FRSC
B.V. Lightman, BA, MA, PhD
M. C. Morrison, BA, MA, PhD
C. M. Murphy, BA, PhD
M. W. Rosenberg, BA, MSc, PhD
L. Salter, BA, MA
J. Sapp, BSc, MSc, PhD
W. E. Seager, BA, MA, PhD
E. L. Shorter, BA, MA, PhD, FRSC
S.. Solomon, BA, MA, CertRusslnst, PhD
I. L. Stefanovic, BA, MA, PhD
R. P. Thompson, BA, MA, PhD
(Director)
A. I. Urquhart, MA, PhD
D. A. Wolfe, BA, MA, PhD
S. Zeller, BA, MA, PhD

Members Emeriti

E. J. Barbeau, BA, MA, PhD
J. D. Fernie, BSc, MSc, PhD, FRSC
P. M. Mazumdar, MSc, MD, PhD
M. P. Winsor, AB, MPh, PhD

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The Institute conducts research, offers programs for advanced studies, 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. The IHPST colloquia, in which degree candidates participate, are open to the University community.

Courses are conducted in seminar style and involve the writing of essays and the presentation of reports.

Degree requirements and procedures described below supplement the regulations given at the beginning of this calendar. Applicants for admission to the Institute's degree programs should arrange for two or three letters of recommendation to be sent directly to the Institute and should submit a statement of their academic background, interests, and needs to the graduate coordinator.

Degree of Master of Arts

Admission to the M.A. program requires a four-year University of Toronto bachelor's degree, or its equivalent from a recognized university. The very broad scope of the field and the variety of fruitful approaches to it imply that many different backgrounds are appropriate. Candidates must meet the general regulations of the School of Graduate Studies with some experience in both the sciences and the humanities.

The program for the M.A. degree consists of a minimum of seven half-course equivalents. At least one half-course must be in the philosophy of science and at least three half-courses must be from the 5000 fundamentals series. Students must also complete HPS 1500H, which involves the writing of a research paper. The remainder of the program is selected by the student in consultation with the faculty, according to the student's background and interests. The student must also demonstrate the ability to read French or German adequately; however, no credit is allowed for French or German language courses if these are necessary to meet the requirement.

It is expected that a full-time student will complete all the requirements for the degree during one year of residence.

Degree of Doctor of Philosophy

Applicants approved by the Institute are admitted as candidates for the Ph.D. degree under the general regulations of the School of Graduate Studies. Admission to the doctoral program requires a University of Toronto M.A. degree in the History and Philosophy of Science and Technology, or its equivalent from a recognized university. Applicants must normally have at least an A average in previous graduate work.

Students must complete six half-course equivalents during the first year of the Ph.D.

program, as approved by the Institute. These will include courses in the 5000 fundamentals sequence as are necessary to ensure an adequate breadth of preparation. The remaining courses are selected by students in consultation with the faculty, according to the student's background and research interests. The requirement of six half-course equivalents may be waived, or modified, for students who have completed additional courses, beyond seven half-course equivalents] at the M.A. level. However, such students will be required to take any courses that are necessary to prepare them for research.

All students must pass a qualifying examination in areas related to the field of expected research. This exam will be held by the middle of the second year of the Ph.D. program, except that for students whose course requirements have been waived, the examination must be held by the end of the first year of the Ph.D. program.

All students must demonstrate reading knowledge of French and another language (normally German), and any other languages required for the research. The language requirements must be met before the qualifying examination is held. Before work on the thesis can begin, a thesis proposal must be approved by the student's thesis Supervisory Committee and the Graduate Coordinator. The proposal should be submitted shortly after the student takes the qualifying examination.

Students will normally be required to be in residence for a minimum of one year. "In residence" means being on campus full time and consequently in such geographical proximity as to be able to visit the campus regularly and to participate fully in the Institute's activities. Ideally the student should complete work for the degree in four years. For more details refer to the departmental handbook.

Collaborative Programs

The Institute participates in the Book History and Print Culture Collaborative Program. For details, consult the separate entry in this calendar.

Courses of Instruction

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/Staff
HPS 1001H	Individual Reading and Research/Staff
HPS 1002H	Individual Reading and Research/Staff
HPS 1003H	Individual Reading and Research/Staff
HPS 1005H	Historical Topics in Scientific Methodology/B. S. Baigrie
HPS 1006H	Historical Introduction to the Sociology of Scientific Knowledge/ Y. Gingras
HPS 1015H	The Scientific Revolution: Galileo to Newton/B. Baigrie
HPS 1017H	Topics in the History of Physics in the Eighteenth and Nineteenth Centuries/Staff
HPS 1018Y	Topics in the History of Technology/B. Hall
HPS 1019H	History of Systematics/Staff
HPS 1020H	History of Evolutionary Biology/ Staff
HPS 1021H	The Intellectual Context of Nineteenth-Century Science/T.H. Levere
HPS 1024H	History of Physiology/Staff
HPS 1025H	History of Immunology/Staff
HPS 1027H	Chemistry from Lavoisier to Mendeleev/T. H. Levere
HPS 1029H	The Invention of Modern Biology/ Staff
HPS 1030H	Newton and Mechanics/Staff
HPS 1036H	History of Engineering/ J. Langins
HPS 1037H	Science in Canadian History/ T. H. Levere
HPS 1038H	Topics in the History of Chemistry, 1600-1950/T. H. Levere
HPS 1042H	The Biology of Death: Experimental Biology and Experimental Medicine, 1860-1940/ N. Krementsov
HPS 1043H	Science in the Renaissance/ B. Baigrie
HPS 1045H	Human Genetics and the Eugenics Movement/Staff
HPS 1046H	Teleology, Adaptation and Design
HPS 1050H	Topics in Ancient Greek and Scientific Revolution Mathematics/C. Fraser
HPS 1052H	The Emergence of Modern Mathematics in the Eighteenth and Nineteenth Centuries/ C. Fraser
HPS 1101H	Philosophy Applied to History of Science/B. Baigrie
HPS 1102H	Laws of Nature/A. Chakravartty
HPS 1103H	Complexity, Reduction and Emergence in Contemporary Biology

HPS 1214H Studies in Ancient and Medieval Science/A. R. Jones
HPS 1215H Medieval Technology and Society/B. S. Hall
HPS 1216H Medieval Technology: Selected Topics/B.S.Hall
HPS 1217H Technology and War: 1090-1918/B. S. Hall
HPS 1500H+ Research Paper
HPS 3000H Historiography of Science and Technology/Staff
HPS 5001H Fundamentals of the History of Mathematics/C. Fraser
HPS 5002H Fundamentals of the History of Physics/Y. Gingras
HPS 5004H Fundamentals of the History of Chemistry/T. H. Levere
HPS 5005H Fundamentals of the History of Biology/Staff
HPS 5006H Fundamentals of the History of Medicine/N. Krementsov
HPS 5007H Fundamentals of the History of Technology II/B. Hall
HPS 5008H Fundamentals of the History of Technology II/J. Langins
HPS 5009H Fundamentals of the History of Astronomy/C. Fraser
JPH 2192H Philosophy of Science/ A. Chakravartty
JPH 2194H Topics in History of the Philosophy of Science/P. Thompson

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/E. Shorter
HIS 1270H History of Psychiatry and Psychiatric Illness/E. Shorter
See Department of History entry for more course offerings.

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

McLuhan Program in Culture and Technology (C&T courses offered only if there is sufficient enrolment)
C&T 1004H Communications in History, Theory, Technology/L. Jeffrey
C&T 1007H Perspective and Design in the Twentieth Century/Staff

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 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

History of Art FAH

Graduate Faculty

Full Members
C. Anderson
K. Andrews
J. Caskey, AM, MA, MPh, PhD
M. Cheetham, BA, MA, PhD
M. Gotlieb, BA, MA, PhD
(Chair)
W. M. Johnson, MA, MFA, PhD
L. Kaplan
E. M. Kavaler, BA, MA, PhD
M. Koortbojian, BA, MA, PhD
E. M. Legge, BA, MA, PhD
E. Levy, MFA, PhD
S. Manning, BA, MA, PhD
M. C. Miller, BA, AM, PhD
A. Nagel, BA, MA, PhD
A. A. Paye, BArch, MA, PhD
D. Reid, BA, MA
L. Safran
P. L. Sohm, BA, MA, PhD
J. T. Wollesen, PhD, Dr phil habil

Members Emeriti
L. Eleen
L. V. Golombek, MA, PhD
D. S. Richardson, BA, MA, PhD
G. Scavizzi
J. W. Shaw, BA, MAT, PhD, DHumLett
M. C. Shaw, BA, MA, PhD
R. Siebelhoff, BA, MA, PhD
F. E. Winter

Associate Members
S. Cohen, BA, MA, PhD
B. Fischer

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Candidates are admitted under the general regulations. Applicants for the M.A. program should have a strong overall grade average in the history of art and closely related subjects, with at least a B+ average in recent senior art history courses. The Department also welcomes applications from outstanding candidates with a background other than art history. Normally, successful applicants must complete the M.A. before proceeding to the Ph.D. Admission into the Ph.D. program will be based on the level of academic performance in the M.A. program including an average of at least A-. Candidates can also be admitted directly into the Ph.D. program with a B.A. if they have an exceptionally strong academic record with a grade average of at least an A- in their art history and humanities courses during the last two years. Students in the M.A. program deemed to have achieved high academic performance can apply for transfer into the Ph.D. program at the end of the first year.

A reading knowledge of French, German, or Italian is required and will be tested at entrance. One or more additional language(s) is required, as outlined below. Those unable to meet the language requirements for particular courses may be refused admission to them. Enrolment in all courses is limited and subject to the approval of the instructor.

Candidates from elsewhere, admitted to a post-M.A. degree, may be required to complete at least one full-course equivalent in addition to the program requirements specified for the Doctor of Philosophy degree.

In addition to the normal History of Art program, the Department also participates in the Ancient Studies Collaborative Program.

Degree of Master of Arts
1 Students are normally admitted to a 1.5 session M.A.
2 Candidates proceeding to the degree will be required to pursue the equivalent of four full graduate courses. Course work must be chosen from at least three of the four areas, designated as Ancient, Medieval, Renaissance/Baroque, and Modern. No more than two full courses may be taken in any one of these areas. The equivalent of one full course may be taken in another graduate department (e.g., Medieval Studies, Near and Middle Eastern Civilizations), subject to the approval of the Department of History of Art and of the other department concerned.
3 In addition to that required at entry, all M.A. candidates are required to show a reading knowledge of one foreign language, to be approved by the Department. Such reading knowledge will be certified by examinations acceptable to the School of Graduate Studies.

Degree of Doctor of Philosophy
In addition to the general regulations, the following special regulations for the usual Ph.D. in Western Art studies should be observed.

1 Course Requirements

All Ph.D. candidates who are admitted after completing the M.A. are required to take, in addition to the course work in the M.A. program, at least two full graduate courses. M.A. and Ph.D. courses in combination should be in three of the following four fields: Ancient, Medieval, Renaissance/Baroque, Modern; overall two full-course equivalents must be taken in each of two fields. If a course cuts across boundaries between two areas, it shall count as one field only. Ph.D. candidates admitted on the basis of a four-year B.A. must take a minimum of 5.5 full-course equivalents in art history and maintain an average grade of at least an A-.

2 Progress through the Program

At the end of the first and second years, the students' progress will be reviewed to ensure that they have made satisfactory progress through the program; this includes maintaining full-time status with a GPA of A- and completion of all language requirements. Students who fail to make satisfactory progress may be required to transfer to the M.A. program with no loss of accumulated course credits.

Within the first two years in a four-year program, or three years in a five-year program, Ph.D. candidates are required to take two comprehensive examinations, one chosen from the four areas designated above and one chosen from the dissertation area. Upon the completions of all course work and language requirements, Ph.D. students must seek out and secure the participation of a prospective supervisor with whom they will discuss plans for the comprehensive examinations. The student will meet with the Examination Committee (made up of at least three members of the Department—one of whom will be the prospective dissertation supervisor—and chaired by the Graduate Coordinator or designate) in order to define the areas of the examination, the length of study, and such readings and special topics as deemed to be appropriate. Immediately following the successful completion of the comprehensive examinations, students are expected to formally establish their Ph.D. Advisory Committee. A faculty member will have already been requested to act as the dissertation supervisor, and two other members of the graduate faculty to serve on their supervisory committee; these arrangements must be approved by the Department's Graduate Program Committee. Then, working with the Advisory Committee, students develop a detailed proposal for their research. The length and specific nature of the proposal will be determined by the Advisory Committee and the Ph.D. candidate, and the drafted proposal must be approved by, first, the Advisory Committee, and second, the Department's Graduate Program Committee. Normally, within three months of completing the comprehensive examinations, each student will then present this preliminary research program orally to members of the faculty and fellow graduate students. Normally, in the year following the completion of the comprehensive examinations, candidates will conduct a seminar for the faculty and students of the Department on an aspect of their thesis topic.

3 Travel Requirements

Before presenting the doctoral thesis, Ph.D. candidates must normally have spent at least three months in travel and research on an itinerary approved by the graduate department.

4 Language Requirements

Ph.D. students are required to pass examinations in two languages (German and either French or Italian) if they have not already done so in the M.A. program. This requirement must be completed before taking the comprehensive exams. Additional languages may be required depending on the research needs of the student's dissertation topic.

5 Areas of Study

Subject to availability of staff supervision, acceptances will be limited to Ph.D. candidates who propose theses in the following areas:

a Ancient (Bronze Age Aegean; Greek and Roman Architecture, Painting, and Sculpture);
b Medieval (Painting and Sculpture);
c Renaissance and Baroque (Architecture, Painting, and Sculpture);
d Modern (Nineteenth-Century, Twentieth-Century, and Contemporary Architecture; Sculpture; and Painting in Europe and North America).

Ancient Studies Collaborative Program

The Departments of History of Art, Classics, and Near and Middle Eastern Civilizations participate in the Ancient Studies Collaborative Program. The program enables students to focus on ancient Mediterranean and/or Near Eastern archaeology, art, and culture. See the separate entry in this calendar.

Book History and Print Culture Collaborative Program

The Department participates in the Book History and Print Culture Collaborative Program. See the separate entry in this calendar.

Courses of Instruction

All courses are not offered each year. Please check the departmental Web site for course availability.

Ancient

FAH 2006H Art and Archaeology of the Prehistoric Aegean/S. Manning
FAH 2007H Archaeology of Homer/S. Manning
FAH 2009H Art and Archaeology of Prehistoric Cyprus/S. Manning
FAH 2012H The Appliance of Science: Art, Archaeology and Science/S. Manning
FAH 2014H Greeks and the East/Staff
FAH 2015H The Arts of Fifth-Century Athens/Staff
FAH 2016H First Civilizations: East Mediterranean Prehistory/S. Manning
FAH 2020H Attic Vase Painting/Staff
FAH 2030H Rome's Monumental Topography/Staff
FAH 2032H History and Myth/Staff
FAH 2033H Triumphal Forms/Staff
FAH 2035H Hellenistic Naturalism and Its Roman Legacy/Staff
FAH 2040H Monument and Epitaph/Staff
FAH 2050H Roman Portraiture/Staff
FAH 2055H The Art of Late Antiquity/L. Safran

Medieval

FAH 1120H Problems in Patronage/J. Caskey
FAH 1121H Twelfth-Century Renaissance?/A. S. Cohen
FAH 1122H Crusaders in the East: Art and Life/J. Wollesen
FAH 1123H The Art of the Medieval Book/A. S. Cohen
FAH 1124H Byzantine Church Decoration/L. Safran
FAH 1125H Problems in Medieval Pilgrimage/L. Safran
FAH 1126H Exceptional Cities of the Middle Ages/Staff
FAH 1127H Early Medieval Art/A. S. Cohen
FAH 1128H Byzantine Art and the West/J. T. Wollesen
FAH 1130Y The Classical Tradition in Western Medieval Art/J. T. Wollesen
FAH 1131H Profane Medieval Art/J. T. Wollesen
FAH 1133H The Normans in Southern Italy and Sicily/J. Caskey
FAH 1134H Communal Painting and Propaganda in Italy During the Thirteenth and Fourteenth Centuries/J. T. Wollesen
FAH 1135H Naples in the Later Middle Ages/J. Caskey
FAH 1171H Beginning of Modernism: From Images to Pictures/J. T. Wollesen
FAH 1228H Representation, Information, and Interpretation of Medieval Pictures/J.T. Wollesen

Renaissance and Baroque

FAH 1209H Art and Anachronism in the Renaissance/A. Nagel
FAH 1211H The Altarpiece in Renaissance Italy/A. Nagel
FAH 1212H The Institution of the Work of Art/A. Nagel
FAH 1213H Art Historiography in Italy, 1550-1750/P.L. Sohm
FAH 1215H History of Bad Art from Gothic to Rococo/P.L. Sohm
FAH 1218H Michelangelo/A. Nagel
FAH 1226H Architecture and Alchemy Before Modernism/C. Anderson
FAH 1241H The Artist's Body/P.L. Sohm
FAH 1243H The Economic Lives of Renaissance and Baroque Artists/P. Sohm
FAH 1245H Pieter Bruegel and Netherlandish Sixteenth-Century Painting/E. M. Kavaler
FAH 1246H Renaissance Gothic/E. M. Kavaler
FAH 1250H Renaissance Sculpture and Architecture in the Netherlands/E. M. Kavaler
FAH 1255H Caravaggio/P. Sohm
FAH 1280H Art and Reform in Early Sixteenth-Century Italy/A. Nagel
FAH 1285H The Art and Architecture of the Counter Reformation/E. Levy
FAH 1286H The Baroque: Models of Persuasion/E. Levy
FAH 1288H Gianlorenzo Bernini/E. Levy
FAH 1290H The Jesuit Baroque/E. Levy
FAH 1291H Architecture, Language, and Literature/C. Anderson
FAH 1292H Devotional Spaces in Early Modern Europe/C. Anderson
FAH 1293H Architecture of the English Renaissance and Baroque/C. Anderson

Modern

FAH 1300H French Architectural Theory, 1700-1900/Staff
FAH 1305H Administrations, Collectors and Dealers in France, 1648-1824/Staff

FAH 1310H History Painting in France, 1648-1824/Staff
FAH 1311H Prints and the Ancien Regime/ Staff
FAH 1320H Orientalism in French Nineteenth-Century Painting/M. Gotlieb
FAH 1410H Artwriting, Past and Present/ M. Cheetham
FAH 1420H Theories of the Sublime in Art/ M. Cheetham
FAH 1455H The Paris Salon, 1784-1900/ M. Gotljeb
FAH 1465H Orientatism/ M.Gotlieb
FAH 1468H The Enemies of Impressionism/ M. Gotlieb
FAH 1472H Colonialism and Visuality, South Asia/D. Dewan
FAH 1474H Avant-Garde, Neo-Avant-Garde/ E. M. M. Legge
FAH 1475H Picasso/E. M, M. Legge
FAH 1476H Surrealism and Post-World War II Art in Europe, the United States, and Canada/E. M. M. Legge
FAH 1510H Contemporary Theories of Photography/L. Kaplan
FAH 1515H Photography and Community/ L. Kaplan
FAH 1520H Photography and Modernism/ L. Kaplan
FAH 1751H Architectural Literature in the Nineteenth and Twentieth Centuries//? Scrivano
FAH 1752H The Circulation of Architectural Knowledge/ P. Scrivano
FAH 1800H James Wilson Morrice/D. Reid
FAH 1801H Portraiture in Canada, 1760-1860: Painting into Photography/ R. Reid
FAH 1850H Cornelius Krieghoff: Images of Canada/D. Reid
FAH 1870H Recent Canadian Art in International Perspective/ M. Cheetham
FAH 1901H Tom Thomson/D. Reid
FAH 1910H South Asian Modernity/D. Dewan
FAH 1920H Primitivism to Globalism: Theories of Otherness in Modern and Contemporary Arts/ E. Harney
FAH 1922H Realms of Exile/E. Harney
FAH 1925H Spectatorship and Narrative: the Politics of Exhibiting/€. Harney

Exhibitions, Collections, and Museums

FAH 3004H Special Studies in Collections/ Staff
FAH 3010H.Y Art and the Museum/Staff

Reading Courses

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

Research Paper

FAH 4000Y Research Paper/Staff

Joint Courses with Other Departments

JAI 1000H Joint Ancient Interconnections: The Eastern Mediterranean During the Middle and Late Bronze Age Period (Credit/no Credit)/Staff

Undergraduate/Graduate Courses

From time to time the Department may offer fourth-year undergraduate courses that have been recognized for graduate credit. Please visit the departmental Web Site.

Relevant Courses in Other Departments

EAS 1229H Topics in Chinese Aesthetics/ J. Liu
EAS 1339H Topics in Chinese Art Theories/ J. Liu
MSL 2050H Artists in the Museum/ E. M. M. Legge
NMC 2500Y Introduction to Islamic Art and Architecture/Staff
NMC 2520H Western Medieval Islamic Architecture/L. V. Golombek
NMC 2521H The Taj Mahal and Its Origins: Medieval Islamic Architecture in Iran, Central Asia, and India/ L. V. Golombek
NMC 2526H Islamic Painting/L. V. Golombek
NMC 2527H Islamic Decorative Arts/ L. V. Golombek

Master of Visual Studies VIS

Graduate Faculty

Full Members
G. Hawken
J. Hoogstraten
S. Lloyd
T. Mars
J. Massey
S. Schelle
L. Steele
(Coordinator of Graduate Studies)
J. Tod
K. Tomczak
S. Wiitasalo

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Web:' www.fineart.utoronto.ca/mvs/general Info. html

Degree of Master of Visual Studies

The degree of Master of Visual Studies (MVS) is a two-year professional studio art program which admits a few students per year. It is distinguished from the more traditional Master of Fine Art degree in that it is not designated as media-specific. Instead, the MVS program offers a unique opportunity to investigate interdisciplinary studio art practice with other knowledge-based activities such as research, critical writing, and professional practice. The internship placement provides a link between the student and the culturally diverse city of Toronto, with its varied galleries, museums, arts publications, and studios.

MVS students are artists whose work in studio art and critical theory will advance knowledge within visual culture and strengthen the connections between the visual arts and other fields of study at the University. The faculty are all visual artists. Students pursue a highly focused investigation within studio practice along with research into contemporary theories exploring the field of vision and its relationship to art and cultural production. The program appeals to students with backgrounds in the humanities and social science disciplines: studio art, visual studies, art history, architecture, museum studies, women's studies, anthropology, comparative literature, cinema studies, environmental studies, and drama.

An artist-in-residence program is being designed to assure that the program is au courant with the latest developments in contemporary art and critical practice.

Interdisciplinary art practice incorporates a variety of media in its conception, production, and expression. New and traditional media—video, installation, print technologies, photography, performance, painting, and digital technologies—are combined with critical writing and curatorial aspects of professional practice unique to contemporary art. MVS students will benefit from the extensive resources available in other graduate programs at the University, including those in History of Art, Museum Studies, History, English, and Computer Science.

Admission Requirements

Applicants to the MVS program must have successfully completed a four-year U of T bachelor's degree (B.A., B.Sc.) with significant course work in the humanities and cultural theory, or an equivalent degree from another recognized university, or a four-year B. F.A. degree from a recognized university. Applicants with an overall average of at least a B+ will be considered. Applicants normally have an exceptional portfolio from an undergraduate program or a substantial exhibition record that accompanies their portfolio.

Candidates must 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 and who graduated from a university where the language of instruction and examination was not English.

Applications must include:
1 completed SGS application form
2 an artist's statement that includes a description of the proposed body of work to be undertaken during the two-year program
3 full curriculum vitae with details of exhibition, professional activity, and education
4 documentation of recent artistic work
5 three letters of recommendation
Details are available on the program's Web site.

Program Requirements

1 The program is undertaken on a full time basis beginning in September and normally extends over two years during which students are registered full-time.
2 All students must complete a total of 6.0 full-course equivalents (FCE) as follows:

a 4.5 FCE in VIS courses in the MVS program. This includes both seminar offerings in contemporary issues within the visual arts and studio-practica that include regular group and individual critiques. The program includes a three-month internship at a cultural institution (VIS 1004H Visual Studies Internship). The internship provides students with important networking opportunities with the many cultural communities in Toronto. Internships outside Toronto will be considered based on requests from students and confirmed participation from host organizations.
b 1.5 FCE in electives outside the MVS program but within the University.
3 Candidates are supervised by an Advisory Committee comprising the Director of the MVS program and a member of the MVS faculty, who will be the candidate's Advisor.

Courses of Instruction

Required (4.5 FCE)

VIS 1000H	Current Ideas in Visual Practice
VIS 1001H	Interdisciplinary Studio Practicum/Critiques
VIS 1002H	Interpreting Visual Content
VIS 1003H	Interdisciplinary Studio Practicum/Critiques II
VIS 1004H	Visual Studies Internship
VIS 2001H	Studio Practicum/Critiques Ill
VIS 2002H	MVS Contemporary Art Issues
VIS 2003Y	MVS Project

Elective (1.5 FCE)

Students select graduate-level courses in a discipline relevant to the study and production of contemporary art. The courses are chosen in consultation with the student's Advisor and must be approved by the MVS Program Director.

Human Development and Applied Psychology HDP

Graduate Faculty

Full Members

M. L. Arnold, BA, MA, EdD
J. W. Astington, BA, BSc, MA, PhD (Chair)
L. R. Atkinson, BA, MA, PhD, CPsych
N. Cohen, BSc, MSc, PhD
C. M. Corter, BA, PhD
A. H. Cumming, BA, MA, PhD
J. Ducharme, BA, MA, PhD
M. Ferrari, BA, MA, PhD
J. Friedland, BA, Dip(P&OT), MA, PhD
E. Geva, BA, MA, PhD, CPsych
L. E. Girolametto, BA, MSc, PhD
J. E. Grusec, BA, PhD
C. Helwig, BA, PhD
T. Humphries, BA, MA, PhD, CPsych
J. Jenkins, BA, MA, PhD, CPsych
M. D. Lewis, BA, MA, PhD, CPsych
S. A. Miezitis, BA, MA, PhD, CPsych
J. P. Pelletier, BA, BEd, OTC, MEd, PhD
K. M. Peterson-Badali, BA, MA, PhD, CPsych (Associate Chair)
J. Rehm, PhD
J. Rovet, BSc, PhD
M. L. Scardamalia, BA, MS, PhD
R. J. Schachar, MD, FRCP(C)
M. Schmuckler, PhD
R. Tannock, MCSP, BSc(PT), MA, MD, PhD
S. E. Trehub, BCornm, MA, PhD
R. J. Volpe, BA, MA, PhD
J. R. Wiener, BA, MEd, PhD, CPsych
D. M. Willows, BA, MA, PhD, CPsych
E. Woodruff, BSc, BEd, MA, PhD
P. Zelazo, PhD, Canada Research Chair
K. J. Zucker, BA, MA, PhD, CPsych

Members Emeriti

C. Bereiter, BA, MA, PhD, LLD
A. J. Biemiller (Jr), Professor Emeritus
P. H. Lindsay, BA, MA, PhD
C. L. Musselman, BA, PhD, CPsych
K. Oatley, EA, PhD
D. R. Olson, BEd, MEd, PhD, University Professor

Associate Members

C. Brandys, BSc, MA, PhD
J. Brockmeier, MA, PhD
V. Bruto
X. Chen-Bumgardner, BA, MA, MEd, PhD
A. C. Caspary, B.SC, M.SC, PH.D.
V. Chisholm, BA, PhD
D. M. Day, BA, MA, PhD
D. Galambos. BA. MEd. PhD
J. F. Hardacre, BA, MEd, DipCS, EdD
G. Hong
K. Krogh, BSc, MA, PhD
K. Kubota-Zarivnij
S. Landy, BA, MA, PhD
P. K. Lee
N. Link, BA, MA, PhD, CPsych
S. A. Mackay, BSc, MA, PhD
A. Malone, BSc, MA, PhD
K. M. Manassis-Krumma, MD, Dip. Psy
D. Matthews, BES, MEd, PhD
J. Metsala
J. K. Moss
M. Perlman, BA,MSC, PhD
A. Perry, BA, MA, PhD
J. Peskin, BA, MA, PhD
K. Scott, PhD
J. Worling, BSc, MA, PhD, CPsych

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The Department of Human Development and Applied Psychology currently offers three graduate programs:

1 Child Study and Education (M.A.)
2 Developmental Psychology and Education (M.A., M.Ed., Ph.D., Ed.D.)
3 School and Clinical Child Psychology (M.A., Ph.D.)

The Department also participates in the Developmental Science Collaborative Program. Consult the OISE/UT Bulletin for full 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 M.Ed. program in Developmental Psychology and Education in September, January, or July, but all other programs in the Department commence in September.

Child Study and Education

The M.A. 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.

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.

The program requires two years of full-time study leading to a Master of Arts degree. 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.

Admission to the two-year M.A. requires undergraduate studies equivalent to a University of Toronto four-year bachelor's degree with standing equivalent to a University of Toronto mid-B or better. Applicants are also expected to have experience working with groups of children, preferably in responsible positions. Normally an interview is required prior to admission.

During their first year, students will complete four six-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. In their second year of study, students will complete a 3.5 month full-time internship in an elementary classroom.

Students wishing to qualify for Part 1 of the three-part qualification in Special Education complete at least one six-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 M.A., M.Ed., Ph.D., and Ed.D. degrees. Students have an opportunity to construct an overall perspective on human development and its implications for practice with children in different applied settings.

Students are required to take core courses in human development and research methodology. Core courses emphasize typical and atypical development in the cognitive and emotional domains and the impact of culture, family, and social relationships on development. Elective courses cover a range of research areas, including early childhood development and education, applied cognitive science, quantitative research methodology, psychometric theory, adaptive instruction and special education, social and personality development, critical thinking, language, literacy and mathematics development, school readiness, instruction and learning, strategies for modifying developmental outcomes and accommodating individual differences, and other applications to contexts such as schools, day cares, and families.

The M.A. and Ph.D. programs are designed for students wishing to pursue an academic or research-based career. The M.Ed. and Ed.D. programs are designed for the reflective teacher or other practitioner in education or related fields.

The M.A. program, comprising six half-courses and a thesis, is normally undertaken on a full-time basis. The M.Ed. program, comprising ten half-courses and a comprehensive examination, may be undertaken on a full-time or part-time basis. The Ph.D. program, comprising six half-courses, a comprehensive examination, and a thesis, is undertaken on a full-time basis. The Ed.D. program comprises eight half-courses, an internship, and a thesis. While students may begin the program on a part-time basis, a minimum of one year of full-time study is required.

School and Clinical Child Psychology

The School and Clinical Child Psychology program is an American Psychological Association (A.P.A.) accredited program. It provides theo-

retical, 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 (M.A.) or psychologist (Ph.D.). 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 A.P.A. Emphasis on designing, conducting, and interpreting scientific research parallels emphasis on exemplary clinical practice.

The M.A. program, comprising 11 half-courses (including a practicum course) and a thesis, is normally undertaken on a full-time basis. The Ph.D. program, comprising ten half-courses (including a practicum course and an internship course), a comprehensive examination, and a doctoral dissertation, is normally undertaken on a full-time basis.

Developmental Science (Collaborative Program)

The Department participates in the Developmental Science Collaborative Program. For details, consult the separate entry in this calendar.

Courses of Instruction

HDP 1200H Foundations of Human Development and Education/Staff
HDP 201H Child and Adolescent Development/Staff
HDP 209H Research Methods and Thesis Preparation in Human Development and Applied Psychology/ M. L. Arnold, M. Lewis, Staff
HDP 211H Psychological Foundations of Early Development and Education/J. Pelletier
HDP 1215H Psychological Assessment of School-Aged Children/M. Peterson-Badali, K. Scott, J. Wiener
HDP 1216H Psychoeducational Assessment/ M. Peterson-Badali, J. Wiener, N. Link, K. Scott
HDP 1217H Foundations of Proactive Behavioural and Cognitive-Behavioural Intervention with Children/J. Ducharme, Staff
HOP 1218H+ Seminar and Practicum in Assessment/N. Link
HDP 1219H Ethical Issues in Applied Psychology/M.Peterson-Badali, Staff
HDP 1220H Introduction to School and Clinical Child Psychology/ J. Wiener
HDP 1222H Approaches to Psychotherapy Across the Lifespan/Staff
HDP 1223H Depression in the Schools: Assessment, Prevention, and Intervention/S. Miezitis
HDP 1234H Foundations of Cognitive Science/Staff
HDP 1236H Developmental Psychopathology/ J. Jenkins, Staff
HDP 1237H Cognitive Development, Learning and Instruction/J. Peskin, M. Ferrari
HDP 1238H Special Topics in Human Development and Applied Psychology/Staff
HDP 1241H Outcomes of Early Education and Child Care/J. Hardacre, Staff
HDP 1256H Child Abuse: Intervention and Prevention/R. Volpe, Staff
HDP 1259H Child and Family Relationships-Implications for Education/C. M. Corter, Staff
HDP 1260H Children, Psychology and the Law/M. Peterson-Badali, Staff
HDP 1265H Advanced Topics in Social and Personality Development/ M. L. Arnold, M. Lewis
HDP 1272H Play and Education/J. Hardacre
HDP 1273H Psychology of Disability and Empowerment/Staff
HDP 279H Preventative Interventions for Children at Risk/R. Volpe, Staff
HDP 284H Psychology and Education of Children and Adolescents with Behaviour Disorders/ J. Jenkins, Staff
HDP 285H Psychology and Education of Children with Learning Disabilities/T. W. Humphries. J. Wiener
HDP 1287H Introduction to Applied Statistics/ R. Childs, G. Hong
HDP 1288H Intermediate Statistics and Research Design//R. Childs, G. Hong
HDP 1289H Multivariate Analysis with Applications/G. Hong
HDP 1291H Casual Inference and Structural Equation Modelling/G. Hong

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

HDP 1292H Test Theory/R. Childs
HDP 1293H Applied Research Design and Data Analysis/ R. Childs, G. Hong, R. Wolfe
HDP 1299H Language Acquisition and Development/ J. Astington, Staff
HDP 2200Y Child Study: Observation, Evaluation, and Reporting/ C. Corter, R. Volpe
HDP 2201Y Childhood Education Seminar and Practicum/J. Hardacre, Staff
HDP 2202H Childhood Education Seminar II: Advanced Teaching/ J. Pelletier
HDP 2210Y Introduction to Curriculum/Staff
HDP 2211H Theory and Curriculum I: Language and Literacy/D. M. Willows
HDP 2212H Theory and Curriculum II: Mathematics/J. Moss
HDP 2221Y Advanced Teaching Practicum/ Staff
HDP 2230H Designing Education Programs/ Staff
HDP 2275H Technology for Adaptive Instruction and Special Education/Staff
HDP 2280H Introduction to Special Education and Adaptive Instruction/Staff
HDP 2283H Psychology and Education of Gifted Children and Adolescents/Staff
HDP 2287H Classroom-Based Counselling Approaches/J. Wiener, Staff
HDP 2288H Reflective Teaching and Analysis of Instruction/Staff
HDP 2292H Assessment for Instruction/ E. Geva, Staff
HDP 2293H Interpretation of Educational ResearchlStaff
HDP 2296H Reading and Writing Difficulties/ O. M. Willows
HDP 3200H Research Proseminar on Human Development and Applied Psychology/M. Perlman, Staff
HDP 3201H Qualitative Research Methods in Human Development and Applied Psychology/R. Volpe
HDP 3203H Children's Theory of Mind/J. W. Astington, Staff
HDP 3204H Contemporary History and Systems in Human Development and Applied Psychology/ R. Volpe, M. Ferrari

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

HDP 3209H Psychology of Language and Literacy/Staff
HDP 3221H Cross-cultural Perspectives on Children's Problems/E. Geva
HDP 3224H Advanced Proactive Behavioural and Cognitive-Behavioural Interventions/ J. Ducharme, Staff
HDP 3225H Developmental Trajectories and High Risk Environments/ J. Jenkins, Staff
HDP 3226H Research Methods and Doctoral Thesis Preparation in Human Development and Applied Psychology/Staff
HPD 3227H Multi-Level Modelling in Social Scientific and Educational Research/G. Hong
HDP 3229H Cognition and Emotion in Development/M. Lewis, Staff
HDP 3230H Understanding Narrative/Staff
HDP 3231H Psychodynamic Bases of Therapy/Staff
HDP 3238H Special Topics in Human Development and Applied Psychology/Staff
HDP 3240H Advanced Social and Emotional Assessment Techniques/Staff
HDP 3241H+ Seminar and Practicum in Assessment and Intervention with Children/Staff
HDP 3242Y° Internship in School and Clinical Child Psychology/N. Link
HDP 3255H Systemic Family Therapy/ J. Jenkins, Staff
HDP 3282H The Psychology of Critical Thinking/Staff
HDP 3286H Developmental Neurobiology/ M. D. Lewis
HDP 3292H Advanced Psychoeducational Assessment and Psychodiagnosis/J. Wiener, Staff
HDP 3297H Biological and Psychological Foundations of Low Incidence Disorders/ J. Ducharme
HDP 5271Y Assessment and Programming for Reading and Writing Difficulties/D. M. Willows, Staff
HDP 5281H Research and Theories of Reading Disability/Staff
HDP 5284H Assessment and Intervention in Multicultural/Bilingual Contexts/ E. Geva
HDP 7002H Ethical, Legal and Professional Issues in Education
HDP 7004Y Practicum in School
HDP 7005H Practicum Internship
JDS 1249H Social-emotional Development and Applications/M. Perlman, M. Lewis

JDS 1233H Cognitive Development and Applications/M. Ferrari
JDS 3000H Advanced Methods in Developmental Science
JHC 1251H Reading in a Second Language/E. Geva
JPX 1001H Parenting: Multidisciplinary Perspectives/C.M. Corter (Coordinator)

Individual Reading and Research Courses

HDP 2252H individual Reading and Research in Human Development and Applied Psychology: Master's Level
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
HDP 5295H Individual Reading and Research in Adaptive Instruction and Special Education: Doctoral Level

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

Immunology IMM

Graduate Faculty

Full Members

B. H. Barber, BSc, MSc. Phd
S. A. Berger, BSc, MSc, PhD
(Coordinator of Graduate Studies)
N. L. Berinstein, MD, FRCP(C)
J. W. Chamberlain, BSc, MSC, PhD
A. Cohen, BSc, MSc, PhD
J. S. Danska, AB, PhD
H. M. Dosch, BSc, MD
E. N. Fish, BSc, MPhil, PhD
R. M. Gorczynski, BA, BSc, MD, PhD
C. J. Guidos, BSc, PhD
J. B. Hay, BSc, MSc, PhD
R. D. Inman, BA, MD, FRCP
N. N. Iscove, MD, PhD
D. E. Isenman, BSc PhD
J. Jongstra, MSc, PhD
M. H. Julius, BSc, PhD
D. Kelvin, MSc, PhD
M. Letarte, BSc, PhD
G. A. Levy, BSc, MD, FRCP, FRCP(C)
S. M. Lewis, BSc, PhD
K. MacDonald, MD, FRCP(C)
T. W. Mak, BSc, MSc, PhD, DSc, FRS, FRSC, University Professor, Canada Research Chair
R. G. Miller, BSc, MSc, PhD, FRSC
P. Ohashi, BSc PhD
M. Ostrowski, MD, FRCP(C), specialist in infectious diseases
C. A. OttaWay, BSc, MSc, MD, PhD, FRCP
C. J. Paige, BSc, PhD, The Ronald N. Buick Chair in Cancer Research
J. M. Penninger, MD, PhD, Canada Research Chair
P. Poussier, MD
M. J. H. Ratcliffe, BSc, PhD
(Chair)
J. C. C. Roder, BA, PhD, Canada Research Chair
C. Roifman, MD, FRCP
R. Rottapel, BA, MA, MD
L. A. Rubin, MD, FRCP
C. Schuh, BSc, MD, FRCP(C)
M. J. Shulman, AB, PhD
E. D. Silverman, MD, FRCP
K. A. Siminovitch, MD, FRCP(C)
F. W. Tsui, BSc, MSc, PhD
T. H. Watts, BSc, PhD
D. B. Williams, BSc MSc, PhD
J. E. Wither, BSc MD, PhD, FRCP
G. E. WU, BSc, MSc, PhD
L. Zhang, MD, MSc, PhD
J. C. Zuniga-Pflucker, BSc, PhD, Canada Research Chair

Members Emeriti

R. H. Painter, BSc, PhD

Associate Members

M. K. Anderson, BSc PhD
J. W. D. Booth, BSc, PhD
J. L. Gommerman, BSc, PhD
J. Jongstra-Bilen, BSc, MSc, PhD
E. C. Keystone, BSc, MD, FRCP(C)
A. Martin, BSc, MSc, PhD, Canada Research Chair

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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 an opportunity for study towards an M.Sc. or a Ph.D. degree 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 above.

Degree of Master of Science

Applicants with a four-year B.Sc., or its equivalent, will be considered. Candidates are normally expected to have at least a B+ average with a strong background in molecular and cellular biology. Applicants from outside North

America are required to provide GRE (general) scores with their application. Candidates lacking adequate training in biological or natural sciences may be advised to do extra course work necessary for their research.

To qualify for an MSc. degree, candidates must complete IMM 1016H, IMM 1019H° and IMM 2021H°, submit a satisfactory thesis embodying their research, and pass an oral examination based on their research.

Degree of Doctor of Philosophy

There are three routes to the Ph.D. degree:

1 Candidates may be accepted for direct entry into the Ph.D. with a BSc. degree, or equivalent, with at least an A- average in their final year.

2 Candidates 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 reclassify into the Ph.D. program.

3 Candidates already holding an MSc. with at least a B+ average may be accepted directly into the Ph.D. program.

Candidates are required to be on campus and participating full-time until the program requirements of research and course work have been completed. The program emphasizes research. In addition, the program requirements include completion of IMM 1016H, IMM 1017H+, IMM 1100H°, IMM 2100H°, and one additional half-course equivalent from either Immunology or outside the Department in a subject relevant to the thesis topic. All candidates are examined in the second year of their program on a submitted research proposal and on relevant course material. To qualify for a Ph.D. degree, the candidate must submit a thesis and defend it at an oral examination conducted by the School of Graduate Studies.

Developmental Biology (Collaborative Program)

The Department participates in the Developmental Biology Collaborative Program. For more details, consult the separate entry in this calendar.

° 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.

Courses of Instruction

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)

Industrial Relations IRE

Graduate Faculty

Full Members

J. H. Amernic, BSc, MBA, FCA
D. K. Foot, BA, AM, PhD
M. K. Gunderson, BA, MA, PhD, CIBC Chair in Youth Employment (Ph.D. Coordinator)
H. P. Gunz, BSc, DPhil, PhD
D. L. Holness, MHSc, MD
D. E. Hyatt, BA, MA, PhD
J. B. Kervin, BA, PhD
M. Krashinsky, SB, MPhil, PhD
B. A. Langille, BA, LLB, BCL
G. P. Latham, BA, MS, PhD, FRSC
L. S.. MacDowell, BA, MSc, PhD
M. P. Macklem, BA, LLB, LLM
D. A. Ondrack, BCom, MBA, PhD
J. E. Quarter, BA, MA, PhD
F. J. Reid, BA, MSc, PhD (Director)
J. G. Reitz, BS, PhD, FRSC, Robert F. Harney Professor of Ethnic Immigration and Pluralism Studies
A. Verma, BTech, MBA, PhD
S. Welsh, BA, MA, PhD
G. R. Whyte, LLB, MBA, MPhil, MA, PhD
J. Xie, BA, MBA, PhD

Members Emeriti

J. Crispo, BCom, PhD

Associate Members

K. Bentham, BAdmin, MIR,PhD ***(Coordinator of Graduate Studies)***
M. Campolieti, BSc, MA, PhD
E. Cousineau, BA, MBA
G. Eckhert, BA, MBA
R. Gomez, BA, MA, MIR, PhD
J. Hardy, BA, BEd, MBA
H. Krashinsky, BA, MA, PhD
A. Levy, BA, MIR, LLM
C. Lipsig-Mumme
J. Mastoras, BA, MIR, LLB
E. Petty, BA, MLS
P. Radhakrishnan, BA, MA, PhD
K. A. Rittich, MusBac, LLB, SJD
M. Rotundo, BA, MIR, PhD
A. M. Saks, BA, MASC., PHD
P. Sawchuk, BSc, BEd, MA, PhD
S. Shl, BA, MIR, LLB, PhD
P. Warrian, BA, MA, PhD
N. Weiner, BSB, MA, PhD

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Additional information is provided on the Centre's Web site.

Degree of Master of Industrial Relations and Human Resources

The purpose of the graduate program leading to the degree of Master of Industrial Relations and Human Resources (M.I.R.H.R.) is to enable students to undertake specialized study which focuses on the employment relationship and examines it from the point of view of a number of disciplines such as economics, law, psychology, and sociology. This focus also includes the nature and relationships of the institutions involved in the employment relationship. The intention is to provide students with the background framework and current knowledge of the field that will serve as a basis for professional careers in labour-management relations, human resources, or policy analysis.

The M.I.R.H.R. degree may be taken on a full-time or part-time basis. If it is taken full-time, the course of study may range from one academic year (eight months) to two academic years (sixteen non-consecutive months) depending upon a student's undergraduate program of study. Advanced standing can be obtained for relevant courses taken previously.

Admission Requirements

1 The minimum admission requirement is a grade average of B+ (77%) in each of the final two years of a four-year University of Toronto bachelor's degree program, or equivalent. Under exceptional circumstances, a three-year bachelor's degree may be considered if it was completed some time ago and if the candidate has significant professional experience and additional qualifications.

2 Students are strongly advised to take introductory economics and statistics courses prior to application. Performance in these courses, as well as performance in other industrial relations and related courses, will be taken into consideration by the admissions committee.

3 Enrolment in the program is limited and meeting minimum requirements does not guarantee admission. All applicants will be evaluated on their individual merits.
4 Candidates whose degrees are not from Canadian universities are required to submit results from the Graduate Record Examination (GRE). The Graduate Management Admissions 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. Scores must be received no later than April 15. Test results more than five years old are normally not considered.
5 Candidates whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must have a TOEFL score of at least 600 and a TWE score of 5 or higher. For the computer-based TOEFL test, the minimum required score is 250 with an Essay Rating score of at least 5.
6 People now working in the fields of industrial relations or human resources who are considering a return to university will have their experience taken into consideration by the admissions committee.
7 Candidates may be granted advanced standing for courses equivalent to those in the first year of the M.I.R.H.R. program. Such courses must have been completed with at least a mid-B standing.

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.

First Year: Foundation Courses
The program consists of two years of study, although advanced standing is possible.

The first year is spent acquiring a foundation in industrial relations and includes courses in economics, law, quantitative methods, organizational behaviour, and sociology.

Students must take ten half-courses, or the equivalent, of which eight are required courses, as follows:

IRE 1002H Applied Statistics in Industrial Relations
Students who enrol in IRE 1002H may not enrol in CRI 2020H Applied Statistics in Criminology
IRE 1010H Economic Environment of Industrial Relations and Human Resources
IRE 1126H Labour Market Policy
IRE 1010H is a prerequisite. This course may be postponed until second year if the student wishes.
IRE 1611H Sociology of Industrial Relations
MGT 1362H Administrative Theory
MGT 2609H Strategic Human Resources Management
MGT 2610H Industrial Relations

Plus one of the following law courses:
IRE 1270H Law of Labour Relations
IRE 1338H Law in the Workplace
IRE 1263Y Labour Law (also Law 263H)

Courses are chosen from the list of optional courses below to fill the requisite ten half-courses, or their equivalent, in the first year of the program.

Students in the M.I.R.H.R. program are required to achieve a mid-B average in the first year of the program (or in the first ten half-courses, excluding grades for exempted courses) in order to continue or to pass into the second year. Failure in any course (that is, a grade of less than B-) will require a review of the student's program by the department.

Second Year: Core Courses
Students must take eight half-courses, or the equivalent, to complete the second year. This includes core courses in Industrial Relations:

IRE 2001H Theoretical Foundations of the Employment Relationship
IRE 2002Y Research Methods in Industrial Relations and Human Resources

Five additional half-courses must be chosen from the list of optional courses.

Due to the multidisciplinary nature of industrial relations, M.I.R.H.R. students are not permitted to take more than a total of three optional courses in any one unit outside the Centre for Industrial Relations without the permission of the Graduate Coordinator. Since outside units normally give preference to their own students, M.I.R.H.R. students can enrol in these optional courses only when space is available.

All requirements for the degree must be completed within six years from the date of first enrolment in the M.I.R.H.R. program. Students must have a mid-B average overall to be recommended for the degree.

Degree of Doctor of Philosophy

The Ph.D. in Industrial Relations is a research-oriented program of study designed to provide students with both a thorough background in the field of industrial relations and research skills to enable them to proceed to careers in academic institutions or in research positions with governments or major organizations. It 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.

Admission Requirements

1 Candidates will be admitted under the general regulations of the School of Graduate Studies and will require a Master of Industrial Relations and Human Resources (M.I.R.H.R.) 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 M.I.R.H.R. program. Students with a bachelor's degree in industrial relations or in a related field of study, may be considered for admission to the Ph.D. if they have exceptional academic standing and have demonstrated quantitative skills and research ability.

2 At least a B+ standing, or equivalent, will be 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, will be taken into consideration by the admissions committee.

3 Candidates are required to submit a copy of their results from the Graduate Record Examination (GRE) before February 1. The Graduate Management Admissions 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.

4 Candidates whose primary language is not English and who graduated form a university where the language of instruction and examination was not English must have a TOEFL score of at least 600 and a TWE score of 5 or higher. For the computer-based TOEFL test, the minimum required score is 250 with an Essay Rating score of at least 5.

5 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, optional courses, and courses in research methods and statistics.

The core requirement in Industrial Relations is met by completing one half-course:

IRE 3004H Special Topics in Employment and Industrial Relations

The research and statistics requirements are met by completing:

IRE 3002Y Research Seminar I
IRE 3003Y Research Seminar II
Prerequisite: IRE 3002Y

and two half-year courses in statistics, chosen, with the approval of the Ph.D. 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 Ph.D. Coordinator.

Two half-year optional courses are chosen from the courses set out below or from selected offerings in other departments and faculties. Students whose prior academic backgrounds do not include an industrial relations theory course, or its equivalent, will be required to take IRE 2001H Theoretical Foundations of the Employment Relationship (from the M.I.R.H.R. program) as one of the optional courses.

Not all courses are offered every year. Please consult the Centre for Industrial Relations timetable which lists available courses in each session.

A comprehensive examination is written under regulations of the Centre for Industrial Relations normally 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 Ph.D. program. The thesis topic and name of supervisor must be submitted no later than October 15.

Students who are in their third and fourth years of study must enrol in the following courses:

IRE 3005H Workshop in Industrial Relations I (Credit/No Credit)
IRE 3006H Workshop in Industrial Relations II (Credit/No Credit)

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.

All requirements for the degree must be completed within six years from the date of first enrolment in the Ph.D. program.

Collaborative Programs

The Centre for Industrial Relations participates in the Ethnic and Pluralism Studies Collaborative Program. Consult the separate entry in this calendar for details.

Optional Courses

The courses listed below are for general information only. Some courses may be available only during the day.

The Centre offers key required and optional courses in Industrial Relations. 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.

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 Industrial Relations for current information.

Some courses are offered only in alternate years, and the availability of optional courses may be subject to change due to such factors as faculty research leaves and departmental resources. 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
(Industrial Relations is a prerequisite)
IRE 1620H Labour Relations Problems in Historical Perspective
IRE 1625H Contemporary Issues in Public Sector Labour-Management Relations
IRE 1630H Negotiation Skills, Theory and Practice
IRE 1635H The Process of Negotiation
IRE 1640H Contemporary Trade Unionism: Issues, Challenges, Strategy
IRE 1645H Alternative Dispute Resolution in the Workplace: Theory and Practice
IRE 1650H Designing Systems for Managing Workplace Conflict
IRE 1715H Special Topics in Industrial Relations and Human Resources: Women in the Workplace
IRE 1720H Managing Organizational Change
IRE 2021H Accounting Information and Industrial Relations
IRE 2715H Special Topics in Industrial Relations and Human Resources
IRE 3615H Creating High Performance Reward Systems
IRE 3620H Topics in Compensation
IRE 3625H Human Resource Research and Information Systems
IRE 3630H Diversity and Inclusiveness in the Workplace

Adult Education and Counselling Psychology

AEC 1101H Program Planning in Adult Education
AEC 1137H Evaluation of Adult Education Programs
AEC 1148H An Introduction to Workplace and Organizational Democracy
AEC 1268H Career Counselling and Development: Transition in Adulthood

Curriculum, Teaching and Learning

CTL 2808H Intermediate Statistics and Research Design

Economics

ECO 2800H Labour Economics I
ECO 2801H Labour Economics II
ECO 2807H Economics and Demographics
(May require a statistics or economics course as a prerequisite)

Law

IRE 207H Equality in Employment (also LAW 207H)
IRE 219H Public Sector Labour Relations (also LAW 219H)
(May require labour law as a prerequisite)
IRE 260H Seminar on Labour Arbitration (also LAW 260H)
(May require labour law as a prerequisite)
IRE 1263Y Labour Law (also LAW 263H)
IRE 1373H Labour Policy (also LAW 373H)

Management

MGT 2129H Forecasting Models and Econometric Methods
(May require a statistics or economics course as a prerequisite)
MGT 2601H Organization Design
(May require an organizational behaviour course as a prerequisite)

MGT 2604H Organization Change and Development
(May require an organizational behaviour course as a prerequisite)
MGT 2605H International Organizational Behaviour
(May require an organizational behaviour course as a prerequisite)
MGT 2611H Not-for-Profit Consulting
MGT 2615H Special Topics in Organizational Behaviour
MGT 2804H Multivariate Methods for Management
(May require a statistics or economics course as a prerequisite)

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
SWK 4650H Social Work Practice with Groups in the Community and in Organizations

Sociology
SOC 6012H Sociology of Work I
SOC 6021Y Sociology and the Policy Process in Canada
SOC 6112H Sociology of Work II
SOC 6302H Statistics for Sociologists

Sociology and Equity Studies in Education
SES 1903H Sociological Survey Research Methods in Education

Other Optional Courses
With the approval of the Graduate Coordinator, students may register in the following credit/no credit courses:
IRE 1001H Skills for Practitioners in IR/HRM (Credit/No Credit)
IRE 4000H Coop in Employment Relations (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

Information Studies FIS

Graduate Faculty

Full Members

E. W. Auster, AB, SM, BEd, MEd, EdD
C. Beghtol, BA, MLS, PhD
J. M. Cherry, BSc, MLS, PhD
(Vice-Dean)
C. Choo, BA, MA, MSc, DipBusAdmin, DipComputerSci, PhD
A. H. Clement, BSc, MSc, PhD
B. H. Craig, BA, MA, PhD
M. Danesi, BA, MA, PhO, FRSC
D. De Kerckhove, BA, MA, PhD, Dip 3eme Cycle, FRSC
E. P. Fleming, BA, BLS, MLS, MA, PhD, FRSC
F. Guardiani, DLett, MA, PhD
L. C. Howarth, BA, MLS, PhD
R. K. Logan, BSc, PhD
B. C. Smith
(Dean)
J. L. Teather, BA, MA, PhD
B. S. Wellman, BA, MA, PhD
I. E. Wilson, BA, MA
E. YU, BSc, MMath, PhD

Members Emeriti

N. J. Williamson, BA, BLS, MLS, PhD

Associate Members

N. Caidi, BA, MA, MLS, PhD
J. Dilevko, BA, MA, MA, PhD, MLIS, PhD
W. M. Duff, BA, MLS, PhD
(Director of Graduate Studies)
G. N. Garlock, EA, MA, MLS, PhD
P. Hajnal, BA, MS(LS)
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The Faculty of Information Studies (FIS) offers degree programs which are administered under the general regulations. These programs are the Master of Information Studies (M.I.St.), the Doctor of Philosophy (Ph.D.), and the combined Juris Doctor and Master of Information Studies (J.D./M.I.St.) Additionally, FIS offers a post-master's diploma program.

The Faculty's application deadlines may differ from the general deadlines given in this calendar. Program details are available on the Faculty of Information Studies Web site at www.fis.utoronto.ca. The Faculty cannot guarantee admission of all applicants who meet its minimum requirements.

The McLuhan Program joined the Faculty of Information Studies in 1994 as a distinct research and teaching unit. More information about the Program follows the description of the Information Studies degree programs and courses of instruction listed below.

Facility in the English Language

All incoming graduate students must 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 and who graduated from a university where the language of instruction and examination was not English. This requirement is a condition of admission and should be met at the time of application.

This requirement may be satisfied using one of the following tests:

1 Test of English as a Foreign Language (TOEFL)
The TOEFL must be accompanied by a Test of Written English (TWE). A minimum TOEFL score of 600 is required on the paper-based test and 250 on the computer-based test. A score of 6.0 is required on the TWE.

2 Michigan English Language Assessment Battery (MELAB)
A minimum score of 95 is required.

3 International English Language Testing System (IELTS)
A minimum score of 8.0 is required.

If an applicant has previously completed a program of study at a university where the language of instruction and examination has been in English, a statement by the applicant's university Registrar, President, or Principal, sent directly to FIS from the university concerned, may be accepted as evidence of facility in English.

Admission decisions will not be made by FIS until test results are received.

Degree of Master of Information Studies

The Faculty offers a program of two academic years leading to the Master of Information Studies degree. It is available on either a full-time or a part-time basis. The M.I.St. degree program offers three specializations: library and information studies, archival studies, and information systems.

Admission Requirements

Students are admitted under the general regulations. Application deadlines are available on the Faculty of Information Studies Web site. An overall average of at least B, with a mid-B in the final year of a four-year bachelor's program, is required for admission to the M.I.St. program. Applicants wishing to take the information systems specialization must also have completed the equivalent of two approved full-year courses in computer science and one approved full-year course in mathematics.

Applicants who meet current admission requirements and who hold a B.L.S. degree from the University of Toronto, or its equivalent from an approved university, may be admitted to the M.I.St. program with advanced standing. Such students may be required to take additional courses if they lack certain requisite instruction.

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 M.I.St. program may also apply for admission with advanced standing. Each application will be evaluated individually. At least eight half-courses towards the M.I.St. degree must be taken at the University of Toronto.

Program Requirements

Computer Literacy

The Faculty expects students to be competent in their use of information technologies. Details are available in the Faculty's calendar.

Course Option

The M.I.St. program consists of 16 half-courses or the equivalent. All students, regardless of specialization, will take the same three core courses. In addition, students must complete the four required courses in their area of specialization and four electives at the 2000-level. The remaining courses 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. The thesis is equivalent to four elective half-courses. Faculty approval is required. Students must obtain at least an A- in FIS 1240H *Research Methods.* This 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 M.I.St.

Time Limit for Completion

All requirements for the M.I.St. degree must be completed satisfactorily within six years from first enrolment in the program. Total time from original registration, including lapsed time, is counted as the time allowed to complete the requirements for the degree.

In exceptional circumstances, a candidate who has failed to complete all the requirements for the degree within the appropriate period may be considered for a deadline extension, following the procedures established by the School of Graduate Studies.

Combined Juris Doctor/Master of Information Studies Degree

The J.D./M.I.St. combined program allows a student to complete two degree programs within a reduced time frame of four years. It is offered jointly by the Faculty of Law and the Faculty of Information Studies at the University of Toronto. The program is for students who wish to combine graduate training in information studies with a degree in law.

At the completion of the four-year integrated program, the successful candidate is awarded both the Juris Doctor and the Master of Information Studies degrees, which, if taken separately, would require five years of study.

Admission Requirements

Applicants to the J.D./M.I.St. program must be admitted to both the Faculty of Law and the Faculty of Information Studies. As such, candidates 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 J.D./M.I.St. program by meeting the normal application and admission requirements of the other Faculty and notifying their Faculty Registrar.

Degree of Doctor of Philosophy

Doctoral study in the field of information studies is concerned with both theoretical and applied scholarship. The discipline has its own area of human experience to analyze, its own body of descriptive and factual data to gather, and its own conceptual schemes to formulate and test. The objective of the Ph.D. program is to prepare graduates to assume leadership roles in information and knowledge-based environments. The program is designed to provide opportunities for advanced scholarly research in the theoretical bases of information studies and in the application of such knowledge to professional practice in various functions (e.g., research, systems analysis and design, administration) in private and public institutions (e.g., higher education, government, libraries, archives, corporations).

The goals are:

1 to produce in Canada highly qualified graduates for careers in research and teaching;

2 to contribute to the development of theory in the field of information studies and to the body of knowledge on which theory and practice are based, both through original and scholarly dissertations and faculty research;

3 to stimulate a scholarly interest in research within the information community in Ontario and throughout Canada.

Admission Requirements

Admission to the Ph.D. program requires an 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 M.L.S. or other master's degree earned in 2 or 3 semesters, or by completing 10 to 15 half-courses, will normally be required to take additional courses in the M.I.St. 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 to the Ph.D. program is limited to graduates of high intellectual ability who have an interest in research. Evaluation of applicants will be 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.

Degree Requirements

Since Ph.D. 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 Doctoral Studies Committee and by SGS.

Students are required to complete:

1 a major subject, FIS 3004Y Advanced Topics in Information Studies,

2 a minor subject,

3 FIS 3005Y Advanced Seminar in Research Methodologies,

4 a Determination of Research Readiness (written and oral),

5 a thesis,

6 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.

The second phase of a student's program is concerned with the choice and development of the thesis topic and research for the thesis.

Time Limit for Completion

Full-time Program

The Ph.D. program is designed to be completed within four years of first enrolment in the pro-

gram. All requirements must be completed within six years from first enrolment. Ph.D. students must be regularly registered in SGS during each year of the program.

Flexible-time Program
The flexible-time Ph.D. program is intended for practicing professionals whose employment is related to their intended field of research interest, The flexible-time Ph.D. differs from the full-time Ph.D. 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 must be completed within six years of first enrolment in the program. Fees arrangements for flexible-time Ph.D. programs apply.

Colloquium Series
The departmental Colloquium Series serves as a forum for special speakers, for the reporting of faculty research, and for the presentation of thesis research by doctoral students. All doctoral students in residence are strongly urged to attend and participate.

Major Subject
The major subject consists of one full course. It sets the context for the thesis and provides the means by which the student's knowledge of the subject, its major works, and its research literature is intensified.

Minor Subject
The minor subject consists of one full course or two half-courses, normally selected from appropriate graduate courses.

Determination of Research Readiness
After completing the requirements of the Major and Minor, and before developing a proposal for dissertation research, a candidate must appear before a committee which will determine the candidate's readiness to undertake research. This takes the form of an oral and written presentation and should display a candidate's critical ability and mastery of the research focus.

Prerequisite and Co-requisite Courses
Students may be required to take additional prerequisite and/or co-requisite courses as part of their program.

Thesis
The student is required to demonstrate the ability to design and conduct independent research by submitting and defending a thesis which constitutes a significant contribution to knowledge in the field of information studies. The thesis must embody the results of original investigation conducted by the student on an approved topic from the major subject area. The thesis is normally written in English but, on petition, French may be permitted.

Each student has a supervisor and two or more advisors for the thesis. The advisors may include members of the graduate faculty of other SGS departments.

Ph. D. Oral Examination
The candidate must defend the thesis at a Ph.D. oral examination normally scheduled by SGS in consultation with FIS.

Collaborative Programs
FIS participates in the following collaborative programs:
1 Addiction Studies
2 Aging and the Life Course
3 Book History and Print Culture
4 Environmental Studies
5 Knowledge Media Design
6 Women's Studies

Collaborative programs provide an opportunity for FIS students to pursue a specialized subject interest as part of their M.I.St. or Ph.D. degree. The SGS calendar includes a separate entry for each collaborative program. Please see the relevant entry for collaborative program 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 Ph.D. program are not open to Special Students.

Diploma Program
The Graduate Diploma of Advanced Study is a post-master's diploma. Applicants must have a University of Toronto M.I.St., M.L.S., or M.I.S. degree or equivalent. The Graduate Diploma requires 24 credit hours (i.e., eight half-courses). 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 the Director of Graduate Studies (FIS).

Complete details are available on the FIS Web site at www.fis.utoronto.ca.

Courses of Instruction

Not all courses are offered every year. Consult the Faculty of Information Studies Web site for courses offered each year. Course descriptions and details of prerequisites, co-requisites, and permissions are printed in the *Faculty Calendar* 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.

M.I.St. Core Courses

Core courses must be taken by students in all three specializations.

FIS 1210H Information and Its Social Contexts
FIS 1230H Management of Information Organizations
FIS 1240H Research Methods

M.I.St. Required Courses

Required courses may also be taken as elective courses by students in all three specializations, providing the necessary prerequisites have been met.

Library and Information Science

FIS 1310H Information Resources and Services
FIS 1311H Information Technology Applications
FIS 1320H Introduction to Bibliographic Control
FIS 1325H Online Information Retrieval

Archives

FIS 1311H Information Technology Applications
FIS 1330H Archives Concepts and Issues
FIS 1331H Archival Arrangement and Description
FIS 1332H Archives Programs and Services

Information Systems

FIS 1340H Introduction to Information Systems
FIS 1341H Analyzing Information Systems
FIS 1342H Designing Information Systems
FIS 1343H Introduction to Database Management and Design

M.I.St. Elective Courses

FIS 2010H Reading Course
FIS 2011H Reading Course
FIS 2030Y Research Project
FIS 2050H Advanced Research Methods
FIS 2101H Information Innovations Design Studio I
FIS 2103H Current Issues in Librarianship-3
FIS 2120H Conservation and Preservation of Recorded Information
FIS 2121H Specialized Archives
FIS 2122H The Public Library in a Diverse Community
FIS 2125H Information and Culture in a Global Context
FIS 2127H Collection Development, Evaluation, and Management
FIS 2131H The Literature of the Humanities and Social Sciences
FIS 2132H The Literature of Science and Technology
FIS 2133H Legal Literature and Librarianship
FIS 2134H Business Information Resources
FIS 2135H Health Sciences Information Resources
FIS 2136H Government Information and Publications
FIS 2137H International Organizations: Their Documents and Publications
FIS 2139H Critical Evaluation of Materials for Young People
FIS 2140H Critical Perspectives on Information Resources and Services for Young People
FIS 2142H Theories of Classification and Knowledge Organization
FIS 2144H Subject Approach to Information
FIS 2145H Creation and Organization of Bibliographic Records
FIS 2147H Computing Methods in Information Science
FIS 2149H Administrative Decision Making in Information Organizations
FIS 2150H Advanced Management of Information Organizations
FIS 2151H Human Resources Management in Libraries
FIS 2153H Technical Services: Organization and Administration
FIS 2154H Reference Services: Organization and Administration
FIS 2158H Management of Corporate and Other Special Information Centres
FIS 2159H Analytical and Historical Bibliography I
FIS 2160H Analytical and Historical Bibliography II
FIS 2161H History of Books and Printing
FIS 2162H Rare Books and Manuscripts
FIS 2163H Research Collections in Canadiana
FIS 2165H Social Issues in Information and Communication Technologies

FIS 2166H Telecommunications for Information Systems
FIS 2168H Information Retrieval Systems
FIS 2169H User-Centred Information Systems Development
FIS 2171H Major Subject Heading and Classification Systems
FIS 2172H Reader's Advisory: Reference Work and Resources
FIS 2173H Information Professional Practicum
FIS 2174H History of Records and Records-Keeping
FIS 2175H Managing Organizational Records
FIS 2176H Information Management in Organizations—Models and Platforms
FIS 2177H Architecting Information, Systems, and Organizations
FIS 2178H Designing Electronic Descriptive Tools
FIS 2179H Interacting with Information Systems
FIS 2180H Archives: Access, Advocacy, and Outreach
FIS 2181H Information Policy
FIS 2182H Information Visualization
FIS 2183H Knowledge Management and Systems
FIS 2184H Appraisal for Records Retention and Archives Acquisition
FIS 2185H Database Techniques for Managing Structured Documents
FIS 2186H Metadata Schemas and Applications
FIS 2199H Special Topics in Information Studies

Ph.D. Courses

FIS 3004Y+ Advanced Topics in Information Studies
FIS 3005Y Advanced Seminar in Research Methodologies

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

McLuhan Program in Culture and Technology

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The McLuhan Program in Culture and Technology was created to continue the legacy of the Centre for Culture and Technology, established in 1963, as a focus for the ground-breaking work of Marshall McLuhan. The Program's mandate is to encourage understanding of the impacts of technology on culture and society from theoretical and practical perspectives. The Program draws together members of the University community whose interests lie in the interdisciplinary study of communications, cuiture, and technology. Through its research, course offerings, publications, speaking engagements, and experimentation in new and old media, the Program also provides a bridge between the University and government, industry, educators, artists, and the general public.

In the summer of 1994, the McLuhan Program joined the Faculty of Information Studies as a distinct research and teaching unit. From its base at the historic Coach House on the east St. George campus, the McLuhan Program engages in four converging lines of activity:

1 To encourage and extend the investigations of the Toronto School of Communications initiated by Harold Innis, Eric Havelock, Marshall McLuhan and others into the impact of technology on culture, with a special emphasis on communications and information media and technologies;

2 To provide a forum for the exchange of ideas between the University and other groups within society, particularly those who have a central concern with the development, design, and consequences of technologically-mediated communications;

3 To offer a range of graduate credit courses and continual learning non-credit seminars and courses;

4 To engage in activities outside the University consistent with the Program mandate.

The McLuhan Program 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.

Courses of Instruction

JAC 100H Media, Mind, and Society I/ D. de Kerckhove
JAC 1002H Media, Mind, and Society II/Staff
C&T 1003H Comparative Orality and Literacy/ Staff
C&T 1004H Communications: History/Theory/ Technology/L. Jeffrey
C&T 1005H Understanding McLuhan/ E. McLuhan, F. Zingrone
C&T 1007H Perspective and Design in the Twentieth Century/Staff
C&T 1009H New Media and Policy/L. Jeffrey

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.

Integrated Manufacturing (Collaborative Program)

Program Committee

M. T. Kortschot, BASc, MASc, PhO, PEng/Chemical Engineering & Applied Chemistry

J. D. Lavers, BSc, MASc, PhD, FIEEE, PEng/Electrical & Computer Engineering

O. Berman, BA, SM, PhD/Management

S. J. Thorpe, BASc, MASc, PhD/Materials Science & Engineering

P. E. Sullivan, BSME, MSME, PhD/Mechanical & Industrial Engineering (Director)

L. Shu, BSc, MSc, PhD/Mechanical & Industrial Engineering

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Web: www.mie.utoronto.ca/grad/GradProg/integmanu.html

The Integrated Manufacturing Collaborative Program provides students with a broad understanding of manufacturing issues, concepts and techniques, and their integration and application. Topics of interest include engineering design, materials in manufacturing, production processes, production planning and control, quality-control systems, computer-integrated manufacturing, and manufacturing management and strategy.

Primary participants in this multidisciplinary collaborative program are departments in the Faculty of Applied Science and Engineering: Chemical Engineering and Applied Chemistry, Materials Science and Engineering, Mechanical and Industrial Engineering as well as the Faculty of Management's Operations Management Group.

The Integrated Manufacturing Collaborative Program is only open to full-time students registered in the M.Eng. degree program in any one of the collaborating Engineering Departments. Participating students are expected to complete the degree requirements within a one-year period: September to August—no students are admitted in January.

Admission Requirements

The Integrated Manufacturing Collaborative Program is only open to full-time students who have a four-year bachelor's degree in any one of the following engineering disciplines: Chemical, Electrical, Industrial, Materials Science, or Mechanical Engineering.

Candidates 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 are required first to gain admission to one of the participating Engineering Departments (listed above) and then request admission to the collaborative program.

Students must complete the M.Eng. degree requirements of both the collaborating department and the Integrated Manufacturing Collaborative Program. Students are strongly advised to consult their respective graduate departments about the exact degree requirements prior to admission into the collaborative program. Students who complete the program receive the M.Eng. degree in their respective home department and the following notation on their transcripts: "Completed the Integrated Manufacturing Collaborative Program".

Program Requirements

Students are required to complete seven half-courses and a four-month industrial project worth three half-courses, for a total of ten half-courses. Students must successfully complete their course requirements within the first eight months (September to April) and a full-time summer project (May to August) at a sponsoring industrial corporation in teams of two students.

The Collaborative Program director arranges opportunities for students to find summer projects with sponsoring corporations. A personal interview is required. In order to avoid any potential conflict of interest, students must not be working, in any way, for an industrial company other than the specific corporation sponsoring their own project during the summer period.

In the event that an industrial project cannot be secured, and with the written approval of the Director, the student must personally seek a summer project to be conducted at the University of Toronto in any one of the collaborating departments.

Courses of Instruction

In addition to the industrial summer project worth three half-courses, students must receive credit for seven half-courses, when possible, within the first eight months of registration in the collaborative program (i.e., September to April):

Four collaborative program core courses:

MGT2406H	Operations Management Strategy
MGT2800H	Management Science
MIE1718H	Computer Integrated Manufacturing
MIE1727H	Quality Assurance

Two home department elective courses:

Students must choose two courses from their own home department specific lists developed for the Integrated Manufacturing Collaborative Program (to be updated yearly). The lists are available in their respective graduate departments at the beginning of the academic year.

One technical elective course:

Students must choose one elective course from any one of the participating engineering graduate departments, not necessarily from their own home department.

During the academic year, students will be encouraged to attend company site visits, technical workshops, seminars, verbal and written communication development courses, and computer programming courses. These are arranged by the program director at no cost to the student (except for possible transportation costs). Students in the collaborative program will also be encouraged to become student members of the Society of the Manufacturing Engineers, also at no cost.

International Relations (Collaborative Program)

Program Committee

S. K. Howson, BA, MA, MSc, PhD/Economics
W. K. Wark, BA, MA, PhD/History
K. Knop, BSc, LLB, LLM, SJD/Law (Combined Program Director)
J. A. Graff, MA, PhD/Philosophy
S. H. E. Clarkson, BA, MA, D de Rech/Political Science
R. J. Deibert, BA, MA, PhD/Political Science (Director)
J. J. Kirton, BA, MA, PhD/Political Science
D. Welch, BA, AM, PhD, Ignatieff Chair/Political Science
H. Friedmann, AB, MA, PhD/Sociology

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Collaborative Master of Arts/Master of Science Program in International Relations

The graduate departments of Anthropology; Economics; Geography; Health Policy, Management and Evaluation; History; Philosophy; Political Science; Sociology; and Study of Religion; in conjunction with the Faculty of Law and the Centre for International Studies (CIS), offer a collaborative Master of Arts/Master of Science degree program in International Relations.

Candidates 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.

Combined Juris Doctor/Master of Arts, Law and Political Science (Specialization in international Relations)

A Combined J.D./M.A., Law and Political Science (Specialization in International Relations) is also available. Please consult the Web site for details.

Admission Requirements

1 Admission will be subject to the approval of the graduate department concerned and the collaborative program.
2 A cumulative average of A- is normally required for admission.
3 Applicants will normally be expected to have completed and passed an introductory course in microeconomics and macroeconomics at the undergraduate level.

Program Requirements

Collaborative international relations students are required to complete a total of five half-courses as follows: three required core half-courses (in international economics, history and philosophy of international relations, and public international law) and two elective half-courses (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 M.A. supervisors, or from the collaborative program's Web site listed above.

Students must demonstrate competence in a second language.

Graduation Requirements

The home department, in consultation with the Director of the Collaborative Program in International Relations, recommends to the School of Graduate Studies that a candidate should graduate following successful completion of the above program requirements. Graduates receive a master's degree in the field of their home department, with a transcript notation indicating completion of the Collaborative Program in International Relations.

International Studies

Graduate Faculty

Full Members

R. D. Accinelli, BA, MA, PhD
V. A. Aivazian, BS, MA, PhD
G. A. Alderson-Smith, MA, PhD
W. M. Baker, BCom, MA, PhD, Royal Bank Chair in Public and Economic Policy
H. D. Benjamin, BSc, MA, PhD
R. A. Berry, BA, PhD, FRSC
Y. M. Bodemann, MA, PhD
R. Bothwell, BA, AM, PhD, FRSC
L. Brandt, BS, MS, PhD
A. Braun, BA, MA, PhD
D. J. Brean, BA, BBA, MBA, MSc, PhD
J. Brunnee, Ref jur, LLM, Doctor juris, Assoc jur
R. J. Brym, BA, MA, PhD
C. G. Chalin Clark, BSN,MA,PhD,MDiv
J. R. D'cruz, BA, MBA, DBA
A. Daniere, MPP, PhD, MCIP
R. J. Deibert, BA, MA, PhD
D. N. Dewees, BSc, LLB, BScEE, PhD
M. W. Donnelly, BS, Institute Certificate, MA, PhD, David Chu Professor of Asia-Pacific Studies
D. Eyoh, BA, MA, PhD
V.C. Falkenheim, BA, MA, PhD
E. Fong, BA, MA, PhD
H. B. Friedmann, AB, MA, PhD
M. S. Gertler, BA, MCP, PhD, MCIP, Goldring Chair in Canadian Studies (UC), Vice-Dean Graduate Research & Education
F. J. Griffiths, BA, MIA, PhD
M. K. Gunderson, BA, MA, PhD, ClBC Chair in Youth Employment
T. F. Homer-Dixon, BA, PhD
S. E. Horton, BA, MA, PhD
S. K. Howson, BA, MA, MSc, PhD
P. C. Hsiung, BA, MA, PhD
R. Iton, BA, MA, PhD
R. E. Johnson, BA, MA, PhD
P. Kingston, BA, MA, MPhil, DPhil
J. J. Kirton, BA, MA, PhD
B. A. Langille, BA, LLB, BCL
R. B. Lee, BA, MA, PhD, FRSC, University Professor
M. D. Levin, BA, MA, PhD
H. V. Luong, BA, MA, PhD
L. S. MacDowell, BA, MSc, PhD
V. W. Maclaren, BA, MRP, MSc, PhD, MCIP
M. O. MacMillan, BA, BPhil. DPhil
M. R. Marrus, BA, MA, PhD, FRHistS, FRSC, Chancellor Rose and Ray Wolfe Professor of Holocaust Studies
P. McCarney, BA, MCP, PhD
J. M. Mintz, BA, MA, PhD
D. E. Moggridge, BA, MA, PhD
K. Mundy, BA, MA, PhD, Canada Research Chair
J. Myles, BA, BT, MA, PhD, Canada Research Chair
N. Nevitte, BA, MA, PhD
A. M. Noyek, MD, FRCSC
C. L. Orwin, AB, MA, PhD
T. L. Pangle, AB, PhD, FRSC, University Professor
J. C. Paradi, BASc, MASc, PhD, FCAE, PEng, SSHRC/NSERC Industrial Research Chair in the Management of
L. W. Pauly, BA, MA, MSc, MA, PhD, Canada Research Chair (Director)
P. H. Pauly, MA, PhD
D. Pietropaolo, BSc, MA, PhD
R. W. Pruessen, BA, MA, PhD
D. Puga, Ldo, MSc, PhD
A. Rossos, BA, MA, PhD
A. Rubinoff, BA, MA, PhD
J. W. Salaff, BA, MA, PhD
K. R. Sandbrook, BA, MA, DPhil, FRSC
K. Sieciechowicz, BA, MA, PhD
R. Simeon, BA, MA, PhD
G. D. Skogstad, BA, MA, PhD
D. Smyth, BA, PhD, FRHistS
P. H. Solomon, BA, MA, CertRusslnst, PhD
S. Solomon, BA, MA, CertRusslnst, PhD
J. Stein, BA, MA, PhD, FRSC, University Professor, Harrowston Professor of Conflict Management and Negotiation
R. E. Stren, BA, MA, PhD
J. A. Teichman, BA, MA, PhD
M. J. Trebilcock, LLB, LLM, FRSC, University Professor
D. Trefler, BA, MPh, PhD
C. J. Tuohy, BA, MA, PhD
A. Verma, BTech, MBA, PhD
J. Veugelers, BA, MA, PhD
R. C. Vipond, BA, AM, MA, PhD
W. K. Wark, BA, MA, PhD
D. A. Welch, BA, AM, PhD, lgnatieff Chair
D. A. Wolfe, BA, MA, PhD
P. J. Wrobel, MA, PhD
X. Zhu, BSc, MSc, PhD

Members Emeriti

J. Barker, AB, MA, PhD
R. M. Bird, BA, MA, PhD, FRSC
R. C. Brown, BA, MA, PhD FRSC
S. H. Clarkson, BA, MA, D de Rech
J. S. Cohen, BA, MA, PhD
S. M. Eddie, Bs, PhD
M. A. FUSS, BSc, MA, PhD
J. Graff, MA, PhD
R. Gregor, BA, MA, PhD
G. K. Helleiner, BA, PhD, FRSC
R. O. Matthews, BA, MIA, PhD
S. B. Philpott, BA, MA, PhD
R. C. Pratt, BA, MPhil
A. Rotstein, BA, PhD
A. E. Safarian, BA, PhD, FRSC

Associate Members

A. Alexandroff, BA, MA, MA, PhD, LLB, PhD
F. Bernstein, BA, MA, PhD
J. H. Dirks, BSc, MD, FACP, FRCP(C), FRSC
W. K. Dobson, BScN, MPA, SM, PhD
B. A. Fischer, BA, MA, PhD
G. Frazer, BMath, BEd, MA, MPhil, PhD
P. Hajnal, BA, MS(LS)
G. Indart, BA, MA, PhD
J. S. Keystone, MD, MSc(CTM), FRCP(C)
N. Kokaz, BA, BA, MA, PhD
M. D. Mazumdar, BA, PhD.
E. P. Neufeld, BA, PhD
S. Ostry, BA, PhD
K. Rankin, BA, MRP, PhD
A. M. Rugman, BA, MSc, PhD
P. Shaffer, DPhil, MA
C. D. Shearing, BSocSci, MA, PhD
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D. Zakus, BSc, MES, MSc, PhD

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The Centre for International Studies (CIS) was established in December 1976. Its purpose is to encourage and facilitate interdisciplinary research and teaching in international studies, broadly defined. The major departments and faculties that cooperate closely with the Centre include Anthropology, East Asian Studies, Economics, Geography, History, Law, Management, Political Science, and Sociology. The Centre also works cooperatively with other University centres, institutes, and programs in cognate fields of study. CIS sponsors lectures and seminars by U of T faculty members and graduate students as well as by visiting scholars and practitioners. It administers a small endowment to assist Ph.D. students needing to travel abroad in order to complete dissertations in international and comparative fields of study.

The Centre sponsors many continuing research programs and special projects.

Graduate students with an interest in international studies are encouraged to visit the Centre's Web site for further information.

International Relations (Collaborative Program)

The Centre administers the Collaborative M.A./MSc. Program in International Relations. Consult the separate entry in this calendar.

Italian Studies ITA

Graduate Faculty

Full Members
S. Bancheri, BA, MA, PhD
R. Capozzi, BA, MA, PhD
G. P. Clivio, BA, MA, PhD
K. Eisenbichler, BA, MA, PhD
A. Franceschetti, LittD, PhD
M. Gieri, DLett, PhD
F. Guardiani, DLett, MA, PhD
(Coordinator of Graduate Studies)
M. Lettieri, BA, MA, PhD
D. Pietropaola, BSc, MA, PhD
(Chair)
O. L. Pugliese, BA, MA, PhD
L. Somigli, DLett, PhD

Associate Members
G. De Angelis

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Candidates are accepted under the general regulations provided that they also satisfy the Department's requirements stated below. In all cases their programs must be approved by the Department.

Degree of Master of Arts

Admission Requirements
Applicants for admission to the M.A. program should submit two letters of recommendation and a personal statement of intent with their application.

For entry into a one-year M.A. program, candidates must have completed seven full undergraduate courses (or equivalent) in Italian to include an appropriate upper-year full course (or equivalent) in language and three full courses (or equivalent) in three different periods of literature. They must also have achieved at least B+ standing in their University of Toronto 300- and 400-series courses (or in equivalent courses).

The Department will determine whether candidates need to complete prerequisite work in order to qualify for admission to a Master of Arts program and will advise candidates accordingly.

Program Requirements
The requirement for the M.A. degree is the completion of the course ITA 1000H Methodologies *for the Teaching and Study of* Italian and of four other full graduate courses or equivalent.

Degree of Doctor of Philosophy

Admission Requirements
Applicants for admission to the Ph.D. program must have completed the University of Toronto M.A. or its equivalent and should submit two letters of recommendation and a personal statement of intent with their application.

Candidates, approved by the Department, must have obtained an overall average of at least A- in the courses taken for the M.A. degree. Candidates must maintain the A- average in order to remain in the program.

Exceptional students may be admitted directly to the Ph.D. program from the B.A. with a minimum A- average. Such applicants will apply to the M.A. program, but indicate in a separate letter to the Graduate Coordinator that they wish to be considered for direct admission to the Ph.D program. If accepted, students from the B.A. level will normally be expected to complete four courses in addition to the Ph.D. requirements listed below for a total of eight full-course equivalents plus the required half-course ITA 1000H. Students accepted from the B.A. will be expected to maintain an A- average in their first four courses in order to continue in the program.

Program Requirements
The program consists of four full graduate courses, or equivalent, for a total of eight courses, including those taken for the M.A. degree. Also required are a qualifying examination, a thesis, and a final oral examination on the thesis.

The degree is offered in the general field of Italian Language/Linguistics and Literature.

Candidates may elect one of the following combinations of major subject (a minimum of six full courses or equivalent) and minor subject (two full courses or equivalent):
1 Italian Language/Linguistics (major) and Italian Literature (minor) or
2 Italian Literature (major) and Italian Language/Linguistics (minor).

For the major subject, candidates may choose one graduate course outside the Department in a subject cognate with the candidate's area of specialization and approved by the Department.

Candidates must have completed the course 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 the third year of Ph.D. registration, must have demonstrated a reading knowledge of Latin and of one other language approved by the Department. Upon completion of all course requirements, and not later than the second year of the Ph.D. program, they will complete the series of written and oral qualifying examinations and, if successful, proceed to prepare their theses.

Permission to write the thesis in Italian (subject to final approval by the School of Graduate Studies) may be granted to candidates who first pass a supervised essay-type English examination to demonstrate proficiency in writing correct and idiomatic English prose.

Collaborative Programs

The Department participates in the following collaborative programs:

1 Book History and Print Culture
2 Editing Medieval Texts
3 Semiotics

For details on these programs, please consult the separate entries in this calendar.

Courses of Instruction

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)/Staff
ITA 1001Y Colloquia and Professional Development (Credit/NoCredit)/Staff
ITA 1025H Old Italian/G. P. Clivio
ITA 1026H Italian Dialectology/G.P Clivio
ITA 1027H Friulian Language and Literature/ Staff
ITA 1028H History and Culture of Molise/ Staff
ITA 1087Y Italian Syntax and Stylistics/G. P. Clivio
JRL 1100Y Introduction to Romance Philology/G. P. Clivio
ITA 1110H History of the Italian Language/ Staff
ITA 1170H Textual Criticism and the Editing of Early Italian Texts/M. Lettieri
ITA 1200H Dante/ D. Pietropaolo
ITA 1203H Boccaccio/Staff
ITA 1330H Petrarch and Petrarchism/Staff
ITA 1455H Women Writers in Italy/Staff
ITA 1550H Sixteenth-Century Florence/ K. Eisenbichler
ITA 1520H Renaissance Humanism/ O. Pugliese
ITA 1525H Renaissance Dialogue/ O. Pugliese
ITA 1530H Machiavelli/O. Pugliese
ITA 1535H Topics in Italian Literature/Staff
ITA 1540H Renaissance Italian Theatre/ K. Eisenbichler
ITA 1545H The Sacra Rappresentazione/ K. Eisenbichler
ITA 1560Y Chivalric Literature from the Origins to Ariosto/A. Franceschetti
ITA 1565H Tasso/F. Guardiani
ITA 1591H Baroque Poetics and Poetry/ A. Franceschetti
ITA 1592H Baroque Poetry and Neobaroque Poetics/F. Guardiani
ITA 1594H Arcadia and Eighteenth-Century Literature/A. Franceschetti
ITA 1597H The Commedia dell'Arte/ D. Pietropaolo
ITA 1601H Vico/D. Pietropaolo
ITA 1605H Theories of the Stage and Dramatic Criticism/D. Pietropaolo
ITA 1610H Seventeenth- and Eighteenth-Century Theatre/S. Bancheri
ITA 1645H Prost-Tridentine Religious Drama/ *S.* Bancheri
ITA 1650H Neoclassical and Pre-Romantic Literary Culture/S. Bancheri
ITA 1661H Topics in Nineteenth-Century Italian Literature/Staff
ITA 1662H Topics in Italian Romanticism/ Staff
ITA 1668H Verga and Verismo/Staff
ITA 1705H PirandeIlo/M. Gieri
ITA 1710H Aspects of Modern Italian Poetry/ R. Capozzi
ITA 1720H Italian Theatre from Verismo to Futurism/G. Katz
ITA 1723H Trends in the Italian Novel 1900-1960/R. Capozzi
ITA 1728H New Trends in the Italian Novel From 1957 to the Present/ R. Capozzi
ITA 1729H Contemporary Literary Criticism in Italy/ R. Capozzi
ITA 1730Y Aspects of Semiotic Theory and Practice in Italy/R. Capozzi
ITA 1735H Topics in Italian Studies I/Staff
ITA 1736H Topics in Italian Studies II/Staff
ITA 1740H Contemporary Italian Women Writers/M. Gieri
ITA 1760H From Futurism to Novecentismo: The Rise and Fall of the Italian Avant-Garde/L.Somigli
ITA 1810H Studies in Italian Literature and Film/M.Gieri

JMI 1951H	Italian Musical Theatre of the Baroque and Classic Periods/ D. Pietropaolo,M. A. Parker
ITA 2010Y	Directed Research in Italian Linguistics/staff
ITA 2011H	Directed Research in Italian Linguistics/Staff
ITA 2020H	Directed Computer Research in Italian Studies/Staff
ITA 2021H	Computer Assisted Research in Italian Language and Literature/ S. Bancheri
ITA 2030H	Second Language Acquisition and Italian/G. De Angelis
ITA 2031H	Third Language Acquisition and Italian/G. De Angelis
ITA 3000H	Topics in Italian-Canadian Studies/Staff
ITA 3001H	Italian-Canadian Culture/Staff
JIC 5000H	Narrativity and Intertextuality in Italian Fiction/R. *Capozzi*

Jewish Studies (Collaborative Program)

Program Committee

I. Kalmar, BA, MA, PhD/Anthropology
A. Most, BA, MA, PhD/English
W. Goetschel, PhD/Gennan
D. J. Penslar, BA, MA, PhD/History (Director)
A. S. Cohen, BA, MA, PhD/History of Art
J. A. Reilly, BA, MA, PhD/Near & Middle Eastern Civilizations
R. B. Gibbs, BA, MA, PhD/Philosophy
C.L. Orwin, AB, MA, PhD/Political Science
D. Novak, AB, MHL, rabbinical diploma, PhD/Religion
L. Livakstavic
Y. M. Bodemann, MA, PhD/Sociology

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Nature of Collaborative Program

The purpose of the Collaborative Program in Jewish Studies is to offer 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 ten graduate units: Anthropology; English; Germanic Languages and Literatures; History; Near and Middle Eastern Civilizations; Philosophy; Political Science; Religion; Slavic Languages and Literature; and Sociology.

Application Procedures

Candidates 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 available to students in the doctoral stream. Candidates may apply to the Collaborative Program as soon as they have been admitted to the doctoral program in one of its constituent departments.

Admission Requirements

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 Two half-courses, one within and one outside of the student's home department. Valid courses include regular offerings and occasional offerings by visiting professors of Jewish Studies.
2 JSP 1000H *Jewish Studies Seminar:* core course in research topics and methods in Jewish Studies.
3 A doctoral dissertation that deals substantively with topics in Jewish Studies.

Courses of Instruction

Courses marked with # are taught by Program faculty and incorporate themes within and outside of Jewish Studies. Not all courses are offered every year.

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

Germanic Languages and Literatures

GER 1530H Heine and Critical Theory

History

HIS 1274H The Nazis, Occupied Europe, and the Jews
HIS 1277H Topics in Jewish History

Courses marked with # 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.

HIS 4331Y Polish Jews since the Partition 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 1304Y Biblical Narrative
NMC 1311Y Post Biblical Hebrew: Mishnah and Midrashim
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 3655H Readings in Jewish Literature

Courses marked with # 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.

Knowledge Media Design (Collaborative Program)

Program Committee

J. W. Danahy, BLA, CUrbDes, MScUrb&DesPl/ Architecture, Landscape, & Design

G. B. Penn, BSc, MSc, PhD/Computer Science

N. Caidi, BA, MA, MLS, PhDllnformation Studies

A. H. Clement, BSc, MSc, PhD/Information Studies (Program Director)

M. H. Chignell, BSc, MSc, PhD/Mechanical & Industrial Engineering

G. Moore, BSc, BLS, MLS, PhD/Sociology (KMDI Director)

B. S. Wehnan, BA, MA, PhD/Sociology

A. N. Bond, BA, MA, PhD (Graduate Administrator)

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Web: www.kmdi.utoronto.ca/collaborative

Nature of the Collaborative Program

The Knowledge Media Design Institute (KMDI) was established in 1998 as a focus for those members of the University community interested in the emerging cross-disciplinary field of knowledge media design. Knowledge media will shape the products, processes, and practices of the 21st century.

The Collaborative Program in Knowledge Media Design (KMD) provides a specialization for graduate students from a variety of academic backgrounds to engage in the design, prototyping, evaluation, and use of media intended to support and enhance the ability of individuals and groups to think, communicate, learn, and create knowledge. In keeping with KMDl's human-centred approach, students will 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 will encourage students to take a broader view of technological and social change and to be constructively critical of both technological utopians and dystopians. 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 available to master's and Ph.D. students in one of the collaborating graduate units. The units currently involved are:

Architecture, Landscape, and Design
Computer Science
Information Studies
Mechanical and Industrial Engineering
Medical Science
Sociology

Admission Requirements

Students wishing to apply to the Collaborative Program must be enrolled, or anticipate being enrolled, in a degree program at one of the collaborating graduate units. 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

1 Students must meet all the requirements of their home department.

2 Master's students must successfully complete KMD 1001H, KMD 1002H, and two half-courses. At least one of these half-courses must be from the KMD 2001-2004 series. The other 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.

3 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.

4 Doctoral students are required to take KMD 1001H and KMD 1002H if not already taken in the master's program, one half-course from the KMD 2001-2004 series, and to have a dissertation topic in the field of knowledge media design. The thesis advisor and at least one other committee member must be from participating units.

5 The home graduate unit and the student's supervising committee will determine further requirements. The collaborating units cooperate in jointly developing a program that is individually tailored to meet the needs of each student.

Courses of Instruction
For courses offered in a particular year, check the Collaborative Program Web site: www.kmdi.utoronto.ca/collaborative.

Knowledge Media Design

Required
KMD 1001H Core Seminar in Knowledge Media Design I - Fundamental Concepts
KMD 1002H Core Seminar in Knowledge Media Design II - Research Frontiers

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 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 2105H Software Engineering
CSC 2106H Requirements Engineering
CSC 2501H Computational Linguistics
CSC 2502H Knowledge Representation and Reasoning
CSC 2504H Computer Graphics
CSC 2507H Office Information Systems
CSC 2509H Data Management Systems
CSC 2511H Natural Language Computing
CSC 2514H Human-Computer Interaction
CSC 2524H Topics in Interactive Computing
CSC 2527H The Business of Software
CSC 2536H Computer Support Cooperative Work
CSC 2537H Hypermedia
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 Database Design
FIS 2103H Organizational Knowledge Management
FIS 2149H Administrative Decision Making in Information Organizations
FIS 2150H Advanced Management of Information Organizations
FIS 2165H The Social Impact of Information Technology
FIS 2169H User-Centred Information Systems Development
JAC 1001H Media, Mind and Society I
MIE 1407H Engineering Psychology and Human Performance
MIE 1409H Design of Ecological Interfaces
MIE 1502H Information Technology and Systems: Management Strategies
MIE 1504H Management of Technological Change
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

Laboratory Medicine and Pathobiology LMP

Graduate Faculty

Full Members

M. M. S. Abdelhaleem, MD, PhD, FRCP(C)
K. A. Adeli, BSc MSc, PhD
B. Alman, MD, FRCSC, Canada Research Chair
I. Andrulis, BA, PhD
S. L. Asa, MD, PhD, FRCP(C), FCAP
I. Aubert, BSc, PhD
A. D. Baines, MD, PhD, FRCP(C)
B. Bapat, BSc, MSc, PhD
D. L. Barber, BSc, PhD
D. J. Bast, BSc, PhD
M. P. Bendeck, BSc, PhD
C. Bergeron, MD, FRCP(C)
R. E. Bishop, BSc, PhD
J. N. Boggs, BA, MSc, PhD
A. L. Bognar, BSc PhD
D. Branch, PhD
R. A. Bremner, PhD
M. Brown, BSc MSc, PhD
J. L. Brunton, BSc, MD, FRCP(C)
L. Burrows, BSc, PhD
D. Cole, MD, PhD, FRCP(C)
P. W. Connelly, BA, PhD
D. W. Courtman, BSc, MSc, PhD
T. Cruz, BSc, PhD
E. Cutz, MD, FRCP(C)
M. I. Cybulsky, MD
J. C. De Azavedo, BSc MSc, PhD
J. W. Dennis, BSc, MSc, PhD, Canada Research Chair
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S. D. Der, BSc, PhD
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P. Dirks, MD, PhD
S. R. Dittakavi, BSc, MSc, PhD
S. J. Done, BA, MA, PhD, MBA, FRCP(C)
D. J. Drucker, MD, FRCP, Canada Research Chair
R. P. Ellen, DDS, CertPerio, CertOralMed&Microbio
H. P. Elsholtz, BSc, MSc, PhD (Coordinator of Graduate Studies)
S. Gallinger, MD, MSc, FRCP(C)
A. I. Gotlieb, BSc, MDCM, FRCP(C) (Chair)
M. D. Grynpas, MSc, PhD
N. Gupta, MD, PhD
P. A. Hamel, BSc, PhD
G. E. Hannigan, PhD
R. E. Harrison, BSc, MSc, PhD
J. B. Hay, BSc, MSc, PhD
D. Hedley, MBCHB, MD
A. Hinek, MD, PhD, DSc
M. H. Hough, BSc, PhD
J. Hu, BSc, PhD
M. Husain, BSc, MD
D. M. Irwin, BSc PhD
G. Jackowski, PhD
T. Jin, MD, PhD
M. G. Johnston, BSc PhD
S. Joshi-Sukhwal, BSc MSc, PhD, DSc
S. Jothy, MD, MSc, PhD, LMCC, FRCP(C)
K. Kain, MD, FRCP(C), Canada Research Chair
S. Kamel-Reid, BA, MA, PhD
R. Kandel, MD, FRCP(C)
F. W. Keeley, BSc, PhD
R. Khokha, BSc, MSc, PhD
B. L. Langille, BSc MSc, PhD
H. Lau, BSc, MA, PhD
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D. E. Low, BSc, MD
G. L. Lukacs, MD, PhD
D. Mahuran, PhD
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C. McKerlie, DVM, DVSc, MRCVS
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H. Ni, MD,PhD
M. Ohh, BSc, PhD, Canada Research Chair
M. J. OpaS, MSc, PhD
H. Ozcelik, PhD
M. J. Phillips, MDCM, MCPath, FCAP, FRCP
M. Post, PhD, DVM, Canada Research Chair
K. P. H. Pritzker, BSc, MD, FRCP(C)
J. Prud'homme, MD
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S. E. Read, MSc, MD, PhD
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J. T. Rutka, MD, PhD, FRCS(C)
J. W. Semple, PhD
A. Seth, BSc, MSc, PhD
P. Shaw, MD,FRCP(C)
P. N. Shek, BSc, MSc, PhD
P. Sherman, MD, FRCP(C), Canada Research Chair
J. A. Squire, BSc, MSc, PhD, JC Boileau Grant Chair in Oncologic Pathology
S. Srinivasan, BSc, MA, PhD
D. J. Stewart, MDCH, FRCP(C)
B. H. Strauss, MD, PhD
R. Tellier. MD. MSc. FRCPC. CSPQ

D. M. Templeton, BSc MD, PhD
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M. Zielenska, MSc, PhD

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D. Ng, BSc, MSc, PhD, MD, FRCP(C)
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The program in Laboratory Medicine and Pathobiology provides a curriculum of courses and a broad-based multidisciplinary approach to research in mechanisms of disease leading to M.Sc. and Ph.D. degrees. The program emphasizes the study of pathogenesis by the development and application of analytical skills in biochemistry, molecular and cellular biology, experimental pathology, genetics, and immunology. The program also emphasizes the nature, mechanisms, therapy, and prevention of microbial diseases in humans.

Current Research Areas
Analytical Biochemistry and Diagnostics
Antimicrobial Resistance: Surveillance and Mechanisms
Biotechnology
Bone and Connective Tissue Diseases including Disorders of Mineral Metabolism
Cancer Pathogenesis and Prevention
Cardiovascular, Blood, and Pulmonary Disorders
Cell-Cell and Cell-Matrix Interactions
Cell Cycle, Differentiation and Signal Transduction Mechanisms
Endocrine and Neuroendocrine Disorders
Gene Therapy
Immunopathology and Transplantation
Inflammatory Disorders
Lipid Disorders
Lymphatic Pathobiology
Microbial Pathogenesis
Neural Development and Neurodegenerative Disorders
Proteomics and Bioinformatics
Protein Structure and Function
Toxicology
Vascular Cell Biology
Viral Diseases

For details consult the departmental Web site www.lmp.facmed.utoronto.ca.

Degree of Master of Science

Admission Requirements
1 Applicants must have completed, or be about to complete one of the following:
a Pathobiology Specialist Program;
b Four-year honours B.Sc. in Life Sciences;
c Professional degree (e.g., M.D., D.D.S., D.V.M., or equivalent).

2 A minimum B+ average over the final two years of undergraduate study.
3 Research experience evidenced by publications, abstracts, or presentations is an asset.
4 Two strong letters of recommendation from faculty members familiar with the applicant's academic work. Departmental appraisal forms must be used.
5 A detailed curriculum vitae.
6 Statement of intent (approximately 250 word/one page).
7 Applicants for this degree program 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 candidate's research and guarantees a full stipend for the candidate.

Program Requirements
1 Students must be on campus and participating for the duration of their registration in the program.
2 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.
3 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 (75% attendance is required).
4 It is expected that students attend the departmental guest lecture series, Seminars in Molecular Pathobiology, that immediately follows the student seminar course LMP100Y.
5 A thesis is completed under the direction of the student's supervisor, assisted by the advisory committee.
6 The duration of the M.Sc. 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:
a write and orally defend a thesis on research completed,
b transfer to the Ph.D. program, or
c withdraw from the M.Sc. program.
7 The research content of the M.Sc. thesis is expected to generate the equivalent of one paper published in a peer-reviewed scientific journal.

Transfer from MSc. to Ph.D. Program
Excellent students with a high academic standing (normally minimum A- average on M.Sc. courses) who have clearly demonstrated the ability to do research at the doctoral level may request consideration for transfer to the Ph.D. program. Recommendation of the advisory committee is required. Transfer to the Ph.D. program is based on the student's performance at an assessment examination, which is held 12 to 18 months after the start of the M.Sc. program.

The student's supervisor will schedule the assessment examination. The examining committee consists of at least six members of the graduate faculty:
a the Graduate Coordinator (or a representative from the graduate faculty of the Department) who chairs the examination committee
b the student's advisory committee, and
c two other graduate faculty members, one of whom is a member from another graduate department.

Degree of Doctor of Philosophy

Admission Requirements
1 Two routes of entry are available:
a Track A
Direct entry into the Ph.D. program is available for highly qualified B.Sc. 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 Ph.D. program.
b Track B
M.Sc. graduates and candidates with a M.D., D.D.S., D.V.M. (or equivalent) degree are eligible for the Ph.D. program. An A- average or higher is required in graduate courses or in a four-year B.Sc. program if there were no course requirements in the M.Sc. program.
2 Research experience evidenced by peer-reviewed publications, abstracts, or presentations is an asset.
3 Two strong letters of recommendation from faculty members familiar with the applicant's academic work. Departmental appraisal forms must be used. Ideally, one of the referees should be the applicant's research supervisor.
4 A detailed curriculum vitae.
5 Statement of intent (approximately 250 word/one page).
6 Candidates for this degree program are selected by the Departmental Admissions Committee on the basis of academic excellence and successful performance at an inter-

view with a member of the departmental graduate faculty. Admission to the program is finalized when a graduate faculty member agrees to supervise the candidate's research, and guarantees a full stipend for the candidate.

Program Requirements

1 Students must be on campus and participating for the duration of their registration in the program.
2 It is expected that doctoral students will complete their Ph.D. degrees within four years of registration in the program. However, short extensions for good cause may be permitted at the discretion of the Graduate Coordinator.
3 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 Ph.D. program. The student's advisory committee may recommend additional courses. Students exempted from LMP 1404H will take a departmental half-course as a substitute.
4 In addition, all students will be required to take two full graduate courses (or four half-courses) plus an ongoing credit/no credit seminar course, LMP 1001Y (75% attendance is required). These courses must include at least one half-course in Laboratory Medicine and Pathobiology. Whenever feasible, courses should be completed in the first two years of the program, the continuing seminar course excepted. Priority is placed on focusing the latter half of the program on research only.
5 Students who take additional graduate courses during the M.Sc. program at the University of Toronto and who continue their graduate studies in the Ph.D. program may receive credit for M.Sc. 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.
6 It is expected that students attend the departmental guest lecture series, Seminars in Molecular Pathobiology, that immediately follows the student seminar course LMP 1001Y.
7 A thesis is completed under the direction of the student's supervisor, assisted by the advisory committee. The student defends the thesis orally, first before a departmental committee, and subsequently before a committee approved by the School of Graduate Studies.
8 The Ph.D. thesis must demonstrate a substantial contribution to laboratory medicine and pathobiology that involves a systematic investigation of disease-related hypotheses. The emphasis is on quality of the science and its presentation. The Ph.D. thesis is normally expected to yield the equivalent of three publications in refereed scientific journals.
9 Ph.D. students are expected to present at least one graduate research seminar in LMP 1001Y prior to their departmental oral thesis defence examination.

Transfer from Ph.D. to M.Sc. Program

Prior to the start of the third year of the Ph.D. program, the advisory committee may recommend that the student transfer to the M.Sc. program; the student may also request the transfer.

M.D./Ph.D. Program

A limited number of selected students may enter the M.D./Ph.D. program subject to admission into both the departmental Ph.D. program and the M.D. program.

Collaborative Programs

An M.Sc. or Ph.D. degree may be taken through this Department in the following collaborative programs:
1 Biomedical Engineering
2 Toxicology, Biomedical
3 Cardiovascular Sciences
4 Developmental Biology
5 Neuroscience
6 Proteomics and Bioinformatics
For more details, consult the separate entries in this calendar.

Courses of Instruction

Not all courses are offered every year. Please check the departmental Web site, www.lmp.facmed.utoronto.ca, for course availability.

JBL 1507H Biochemistry of Inherited Disease/D. J. Mahuran

LMP 1001Y Graduate Seminars in Laboratory Medicine and Pathobiology (Credit/No Credit)/D. M. Irwin, J. *Mogridge*
Mandatory for all MSc. and Ph.D. students in the Department of Laboratory Medicine and Pathobiology

LMP 1003Y Seminars on Diseases of the Central Nervous System (for postgraduate trainees only)/ S. Nag

LMP 1005Y General and Special Pathology (for Oral Pathology Residents only)/R.J. McComb

LMP 1006H Biological Electron Microscopy/ B. *Mullen*

LMP 1012H Seminars on Pathology (open to students in Biomedical Communications only)/C. Sherman
LMP 1013H Neoplasia/P. Hamel
LMP 1015H Vascular Pathobiology/B. L. Langille
LMP 1016H The Pathology of Connective Tissue/K. P. H. Prifzker
LMP 1018H Molecular Biology and Applications to Human Disease/J. O. Minta
LMP 1019H Research Techniques in Molecular Biology and Pathobiology/E.P. Diamandis, D. Irwin
LMP 1020H Inflammation, Immunity, and Immunopathology/J. O. Minta
LMP 1401Y Clinical Biochemistry (for Residents and Diploma students only) /A. Vandenbroucke
LMP 1404H Molecular and Cellular Mechanisms of Disease/M. I. Cybulsky, M. Rozakis-Adcock
Mandatory for all MSc. and Ph.D. students in the Department of Laboratory Medicine and Pathobiology
LMP 1407H Introductory Clinical Epidemiology and Applied Biostatistics/ R. Vieth
LMP 1502H Atherosclerosis and Lipoprotein Disorders/P. W. Connelly
LMP 1503H Signal Transduction Pathways in Normal and Diseased Tissues/ C. A. Lingwood
LMP 1504H Cell and Molecular Biology of Cardiovascular Diseases/ A. I.. Gotlieb
LMP 1505H Analytical Clinical Biochemistry/ P. Y. Wong, P. C. Chan
LMP 1506H Techniques in Functional Genomics and Proteomics/E. P. Diamandis, S. Der
LMP 1510H Molecular Biological Aspects of Analytical Biochemistry: Molecular Biology Techniques/ D. Irwin
LMP 2115H Selected Topics in Medical Microbiology/J. Mogridge
RST 9999Y Research Project/Staff

Law

Graduate Faculty

Full Members

P. Benson, AB, MSc, LLB, LLM
A. S. Brudner, BA, MA, LLB, PhD
J. Brunnee, Ref jur, LLM, Doctor juris, Assoc jur
B. Chapman, BA, LLB, PhD
R. Cook, AB, MA, MPA, JD, LLM, JSD
J. Cossman, BA, LLB, LLM
K. Davis, BA, LLB, LLM
D. N. Dewees, BSc, LLB, BScEE, PhD
D. G. Duff, BA, MA, LLB, LLM
J. Duggan, BA, LLB, LLM, LLD
D. Dyzenhaus, BA, LLB, DPhil, FRSC (Associate Dean, Graduate Studies)
J. L. Hagan, BA, MA, PhD, FRSC, University Professor
D. M. Johnston, JD, LLM
K. Knop, BSc, LLB, LLM, SJD
B. A. Langille, BA, LLB, BCL
J. G. Macintosh, BSc, LLB, LLM, The Toronto Stock Exchange Chair in Capital Markets
M. P. Macklem, BA, LLB, LLM
A. Macklin, BA, LLB, LLM
M. Moran, BA, BEd, LLB, LLM, SJD
M. Morgan, BA, LLB, LLM
J. R. Nedelsky, BA, MA, PhD
J. R. Phillips, MA, LLB, PhD
J. Putman BA, MA, PhD
D. G. Reaume, BA, LLB, BCL
A. s. Ripstein, BA, PhD, MSL
K. W. Roach, BA, LLB, LLM
c. J. Rogerson, BA, LLB, MA, LLM
D. Schneiderman, BA, LLB, LLM
M. Shaffer, AB, LLB, LLM
L. Sossin, BA, MA, LLB. PhD, LLM, JSD
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C. Valcke, LLB, LLM, JSD
S. M. Waddams, BA, LLB, MA, LLM, SJD, FRSC, The Goodman/Schipper Chair at the Faculty of Law
A. S. Weinrib, BA, LLB, LLM
E. J. Weinrib, BA, LLB, PhD, University Professor, The Cecil A. Wright Chair
L. E. Weinrib, BA, LLB, LLM

Members Emeriti

B. M. Dickens, LLB, LLM, PhD, LLD, Dr. William M. Scholl Professor Emeritus in Health Law and Policy
M. L. Friedland, BCom, LLB, PhD, LLD, OC, QC, FRSC, University Professor Emeritus

Associate Members

B. R. Alarie, BA, MA, LLB, LLM
L. M. Austin, BA/Bsc., LLB, MA
S. Choudhry, BSc, BA, LLB, LLM
A. Drassinower. BA. MA. LLB. PhD
A. S. Fernandez, BPHIL, MPH, LLB, LLM
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A. Katz, BA, LLB, LLM
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T. M. Lemmens, Candlur, Liclur, LLM
F. Megret, LLB, LLM
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Enquiries

Enquiries should be directed to the Graduate Programme Coordinator, Graduate Program, Faculty of Law at the address above.

TOEFL Requirements

Candidates whose primary language is not English and who graduated from a university where the language of instruction and examination was not English must have a TOEFL score of at least 600 and a TWE score of 5 or higher on the paper-based test. For the computer-based TOEFL test, the minimum required total score is 250 with an essay rating score of 5. Offers of admission conditional upon successful completion of an English language test will not be offered.

Degree of Master of Laws

Candidates for this degree are accepted under the general regulations and the special regulations governing administration of degrees of LL.M.

Admission Requirements

An applicant for admission to the degree of Master of Laws (LL.M.) will generally have a Bachelor of Laws or Juris Doctor degree from this or another recognized university, or possess equivalent qualifications, and must have demonstrated proficiency in the study of law. A minimum B+ average is required.

Program Requirements
1 The candidate must be in attendance for at least two academic sessions (eight months, September to April).
2 The candidate must complete a course of studies and a thesis which, combined, are valued at 24 credit hours.
3 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 between 50 to 60 pages, double spaced, or 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 between 100 and 150 pages, double spaced, or approximately 30,000 to 45,000 words).
4 The course of studies shall include the mandatory graduate seminar, Alternative Approaches to Legal Scholarship.
5 All course work and the thesis shall be graded using the SGS grading scale.
6 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 candidate and the subject matter of the thesis. However, such course of studies and the weight of the thesis shall at all times be such as the Faculty shall determine.
7 In the full-time LL.M. program, the course work requirements must be completed by May 31 of the academic year of attendance and the thesis must be completed by August 31 of the academic year of attendance.
8 The LL.M. program may, with approval of the Associate Dean, Graduate Studies, Law, be taken on a part-time basis over two years, in which case the course work requirements must be completed by May 31 of the second academic year of attendance and the thesis must be completed by August 31 of the second academic year of attendance. Continuation in the second year of the part-time LL.M. program is subject to the Faculty's determination that the candidate has made satisfactory progress in the first year of part-time LL.M. studies.

Degree of Master of Studies in Law
This program is designed for scholars, in disciplines related to law, who wish to acquire a knowledge of law in order to add a legal dimension to scholarship in their own discipline.

Admission Requirements
Applicants must hold at least a bachelor's degree and preferably a doctorate, from this or another recognized university, and must have demonstrated a high level of scholarship in a discipline related to law.

Program Requirements
1 The candidate must be in full-time attendance for two academic sessions (eight months).
2 The candidate must pursue a course of studies approved by the Faculty and by the SGS Admissions and Programs Committee.
3 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.
4 The program will also include a research project of an interdisciplinary nature.

Note: In no circumstance will courses taken in an M.S.L. program be accredited for the J.D. program.

Degree of Doctor of Juridical Science
Candidates for this degree are accepted under the general regulations and the special regulations governing administration of degrees of Doctor of Juridical Science (S.J.D.).

Admission Requirements
A candidate for the degree of S.J.D. will generally hold a Bachelor of Laws or Juris Doctor degree (with a minimum B+ average) from this or another recognized university and a Master of Laws (with a minimum B+ average) of this or another recognized university or possess equivalent qualifications. The Associate Dean, Graduate Studies, Law has the discretion to permit direct entry into the S.J.D. following completion of the Bachelor of Laws or Juris Doctor degree where the Graduate Committee is satisfied that the candidate's law record demonstrates excellent potential for independent legal research and writing at an advanced level.

Program Requirements—S.J.D.
1 A candidate must remain in attendance for at least two academic sessions (eight months, September to April).
2 A candidate must complete the graduate seminar, Alternative Approaches to Legal Scholarship.
3 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.
4 Area Requirement: Before being allowed to proceed with formal research on a thesis topic, a candidate must demonstrate competence in a broader area within which the topic falls. An

Individual Area Committee (established by the student and approved by the Associate Dean, Graduate Studies, Law) assists in framing that area and compiling an appropriate plan for carrying out the research. The research undertaken by the candidate 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 candidate will have satisfied the area requirement by the end of the first year of registration.

5 A candidate will not be allowed to continue in the doctoral program, where, in the opinion of the Area Committee, the candidate is not capable of demonstrating the capacity for independent legal research and writing at an advanced level.

6 Following completion of the area requirement, 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 on the same.

7 The thesis must be completed within five years from the date of enrolment in the program.

8 No candidate will be recommended for the degree until the thesis has been approved by the Faculty of Law and is presented in such form as to be worthy of possible publication either in whole or in an abstract. Thesis publication is normally accomplished as described in the Ph.D. regulations in this calendar.

Program Requirements–Direct Entry S.J.D.

1 A candidate must be in attendance for at least four academic sessions (two periods of eight months each, September to April).

2 A candidate must complete at least eight credit hours, including the graduate seminar, Alternative Approaches to Legal Scholarship.

3 All course work shall be subject to the approval of the Associate Dean, Graduate Studies, Law.

4 Area Requirement: Before being allowed to proceed with formal research on a thesis topic, a candidate must demonstrate competence in a broader area within which the topic falls. An Individual Area Committee (established by the student and approved by the Associate Dean, Graduate Studies, Law) assists in framing that area and compiling an appropriate plan for carrying out the research. The research undertaken by the candidate 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 candidate will have satisfied the area requirement by the end of the first year of registration.

5 A candidate will not be allowed to continue in the doctoral program, where, in the opinion of the Area Committee, the candidate is not capable of demonstrating the capacity for independent legal research and writing at an advanced level.

6 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 on the same.

7 The thesis must be completed within five years from the date of enrolment in the program.

8 No candidate will be recommended for the degree until the thesis has been approved by the Faculty of Law and is presented in such form as to be worthy of possible publication either in whole or in an abstract. Thesis publication is normally accomplished as described in the Ph.D. regulations in this calendar.

Collaborative Programs

Applicants to the LL.M. and S.J.D. programs may also apply to participate in one of the following collaborative programs:

1 Bioethics

2 Women's Studies

Each program provides an opportunity to do interdisciplinary work in another field at an advanced level. For details, consult the separate entries in this calendar.

Courses of Instruction

Students may select courses from those listed in the syllabus of the Faculty of Law. These are accepted for credit at the graduate level. M.S.L. students may take courses from the first year of the J.D. program. Normally LLM. and S.J.D. students will select courses only from the upper year course list. In addition, there is one course exclusively for graduate students:

LAW 245Y Alternative Approaches to Legal Scholarship/Staff

Life Course and Aging

Full Members

R. S. Abramovitch, BA, MA, PhD
K. R. Allison, BSc, BPHE, MASc, MSc, PhD
D. Behrens, HBA, MS, PhD
A. Bierman, BA, MD, MS, Ontario Women's Health Council Chair in Women's Health
D. Brownfield, PhD
A. Carswell, Dip(OT), BSc, MSc,PhD
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A. Colantonio, BA, BSc, MHSc, PhD
C. M. Corter, BA, PhD
C. Cott, Dip(PT), BPT, DipGer, MSc, PhD
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D. W. Livingstone, BA, PhD
D. Locker, BDS, PhD
W. Magee, BA, MS, PhD
E. A. Marziali, BA, MSW, PhD, Schipper Chair in Gerontological Social Work
L. McDonald, BA, MSW, PhD (Director)
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D. L. Wells, BA, MHSc, PhD
L. Wells, BA, BSW, MSW, DASW, CSW
S. Welsh, BA, MA, PhD
B. Wheaton, BA, MA, PhD

Members Emeriti

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The Institute has two principal mandates: multidisciplinary research and post-graduate education.

Research

The primary mandate of the Institute is to conduct basic and applied, multidisciplinary research from a social science perspective on the life course and aging. The Institute offers graduate students and faculty the opportunity to work in a collaborative environment that fosters research and education. It acts as a catalyst to bring together researchers from various sectors of the University and collaborates with teaching hospitals, government, and social agencies. It offers resources, services, and leadership on research, planning, and policy issues. The research program of the Institute covers several theme areas:

1 aging and the life course
2 life course theory and methodology

3 work and family and the life course
4 health and the life course
5 crime and law and the life course
6 learning and the life course

Education

The Institute offers a collaborative graduate program in Aging and the Life Course. Graduate students register in participating home departments and acquire a subspecialty in aging, denoted on their transcript. For more details consult the Aging and the Life Course (Collaborative Program) entry in this calendar.

Four research fellowships are awarded annually to further support students in the area of aging and the life course:

1 The Wilfred George Scott Fellowship in Gerontology;
2 The Helen and George Coward Award in Gerontology;
3 The Leon and Blossom Wigdor Scholarship Fund;
4 The Northwater Capital Management Award in Aging.

The Institute offers a noon-hour seminar series and an annual lecture that address life course and aging issues. The schedule of talks is listed on the Institute's Web site.

The Institute offers space and a small resource centre to graduate students and lab space for in-house research faculty members. It also houses two community groups, the Ontario Network for the Prevention of Elder Abuse (ONPEA) and Connecting Seniors of Canada (CSC). Anyone interested in research studies on the life course and aging should contact the Institute for information.

Linguistics LIN

Graduate Faculty

Full Members

P. M. Bhatt, BA, MA, PhD
R. I. Binnick, BA, MA, PhD
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B. E. Dresher, BA, PhD
(Coordinator of Graduate Studies)
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A. Johns, BA, MA, PhD
P. J. Martin, IRAL BR, D lle C, DSCA,ChPA
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K. D. Rice, BA, MA, PhD
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Web: www.chass.utoronto.ca/linguistics/

Program Fields

The Department of Linguistics offers graduate degree programs in three fields:
1 Theoretical Linguistics
2 Language Variation
3 Psycholinguistics

Degree of Master of Art

Applicants must have at least a B+ average to be considered for admission. Applicants whose academic background does not include courses in introductory phonetics, phonology, morphology, and syntax are normally not admissible. If the applicant's academic background is limited to these courses, or the equivalent, consideration may be given for admission to a two-year program.

The M.A. program includes the courses LIN 1121H, 1131H, 1181H, 1290Y, and JAL 1145H, or their equivalents, if not already taken, plus other requirements as determined by the Department. LIN 1290Y is taken in the final year of the degree. In the case of a two-year M.A., LIN 1121H, 1131H, and 1181H are normally taken in the first year. Students will be admitted to a one-year (normally four course) or two-year (normally eight course) program depending on their background.

All students must demonstrate an ability to read professionally in two languages other than English. The choice of languages 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.

Degree of Doctor of Philosophy

Candidates will be considered for admission if they have completed the University of Toronto M.A. in linguistics, or its equivalent, with at least an A- average.

Students are normally required to complete three full-course equivalents 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.

Language requirements as outlined for the M.A. degree must be satisfied, and 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.

Collaborative Programs

The Department of Linguistics participates in the Collaborative (M.A.) Program in Semiotics. For admission and degree information, please consult the separate entry in this calendar.

Courses of Instruction

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
JIL 1140H	Semiotics
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)
LIN 1028H	Phonetics
LIN 1029H	Sound Patterns in Language
LIN 1031H	Morphological Patterns in Language
LIN 1032H	Syntactic Patterns
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 1154H	Sociology of Language
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 1251H	Variation Theory
LIN 1254H	Sociolinquistic Methods
LIN 1256H	Grammatical Variation
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 1505H	Research Seminar
LIN 1507H	Individual Readings I
LIN 1509H	Individual Readings II
LIN 2201H	Generals Paper I
LIN 2202H	Generals Paper II

Management MGT

Graduate Faculty

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(Dean)
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D. Soman
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G. R. Whyte, LLB, MBA, MPhil, MA, PhD
(Coordinator of Graduate Studies)
J. Xie, BA, MBA, PhD
P. Zhang, BSc, MBA, MAcc, PhD

Members Emeriti

R. M. Bird, BA, MA, PhD, FRSC
J. Crispo, BCom, PhD
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M. J. Gordon, BA, MA, PhD, LLD, FRSC
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T. A. Wilson, BA, AM, PhD, FRSC

Associate Members

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J. L. Berdahl, BA, MA, MA, PhD
A. T. T. Ching
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K. B. Dahlin, MSc, PhD
G. De Franco, BA, MBA
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M. Rindisbacher. BS. MSc. PhD

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D. Segal, BA, PhD
I.. W. Skurnik, BS, MA, PhD
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S. M. Toh, BBS, PhD
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DEGREE OF MASTER OF BUSINESS ADMINISTRATION

Please note that the Rotman School of Management is improving the M.B.A. program and may be making minor changes to the curriculum over the next academic year, designed to strengthen and integrate the program. The information in the calendar entry is accurate as of the printing deadline, but may change as a result of these improvements. Consult the Rotman School of Management for details.

The Joseph L. Rotman School of Management offers three Master of Business Administration (M.B.A.) degree programs:
1 Full-time M.B.A.
2 Part-time M.B.A.
3 Executive M.B.A.

In addition, the School works collaboratively with the Faculties of Law, Applied Science and Engineering, Nursing, Arts and Science, and the School of Graduate Studies to offer the following combined programs:
1 J.D./M.B.A. (Law)
2 B.A.Sc./M.B.A. (Engineering)
3 M.N./M.B.A. (Nursing)
4 M.A./M.B.A. (Russian and East European Studies)

Admission Requirements for the Full-time and Part-time M.B.A. Programs

M.B.A. candidates are advised to consult the Rotman M.B.A. brochures for complete information on the graduate programs in Business Administration. Such information is available through the Office of Recruitment and Admissions at the Rotman School of Management or on the Web site at www.rotman.utoronto.ca.
1 Candidates for the degree of Master of Business Administration are considered under the general regulations which specify a four-year University of Toronto bachelor's degree or equivalent.
2 Applicants must also obtain a satisfactory score on the Graduate Management Admissions Test (GMAT) administered by the Educational Testing Service (ETS) of Princeton, New Jersey (www.gmac.com). Test results are valid for five years.
3 Candidates may proceed to the degree through either part-time or full-time study. The full-time program admits annually in September and the part-time program admits annually in May.
4 Preferential consideration will be given to applicants to the full-time program who demonstrate a minimum of two years of full-time work experience. Preferential consideration will be given to applicants to the part-time program who demonstrate at least four years of full-time work experience.
5 Admission decisions are made on a rolling basis. Applicants for the full-time M.B.A. program are therefore encouraged to apply before January 15 and no later than April 30 (final deadline). Applicants for the part-time M.B.A. program should apply by February 1.

Program Requirements for Full-time M.B.A.
www.rotman.utoronto.ca/mba/admission.htm

1 The program, beginning in September, extends for two academic years (16 months).
2 The first year of the program consists of a set of required courses at the 1000 level. All students must complete the entire set of required courses. No advanced standing will be granted for previous academic work completed or professional designations earned.
3 The second year of the program consists of nine elective courses at the 2000 level and one mandatory 2000-level course, MGT 2911H Integrative Management Challenge.
4 Required courses (1000-level courses) are weighted as one, two, or three modules. Three module courses are equivalent to three credit hours.
5 Elective courses (2000-level courses) each have a weight of 3 credit hours. With the permission of the M.B.A. Program Director, 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 M.B.A. Program Director.
6 All degree requirements must be completed within six years from the date of first enrolment in the program.

Program Requirements for Part-time M.B.A.
www.rotman.utoronto.ca/ptmba/admission/criteria.htm

1 The program covers the equivalent of two academic years but is delivered over a three-year period.
2 The study program consists of a set of required courses at the 1000 level, and a second set of required and elective courses at the 2000 level.
3 In required courses taken at the 1000 level, a course will be composed of either one, two, or three modules. Three-module courses are equivalent to three credit hours.
4 After completing the required courses at the 1000 level, students must take a total of 10 2000-level courses.
5 Elective courses (2000-level courses) each have a weight of 3 credit hours. With the permission of the M.B.A. Program Director, 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 program of courses selected is subject to the approval of the Rotman School.
6 All requirements for the degree must be completed within six years from the date of first enrolment in the M.B.A. program.

Courses of Instruction
Weighting for MGT 1000-level courses is determined by the second digit of the four-digit course number as follows:

Second Digit	Course Weight
0	CR/NCR (Credit/No Credit)
1	one credit hour
2	two credit hours
3	three credit hours

The Department should be consulted each session as to course offerings.

1000 Level

MGT 1095H Multidisciplinary Special Topics
MGT 1201H Values, Judgements, and Decision Making
MGT 1210H Managerial Economics
MGT 1211H Economic Environment of Business
MGT 1222H Managerial Accounting
MGT 1241H Operations Management
MGT 1261H Managerial Negotiations
MGT 1262H Leadership
MGT 1263H Managing People in Organizations
MGT 1272H Management Information Systems
MGT 1301H Fundamentals of Strategic Management
MGT 1320H Financial Accounting
MGT 1330H Business Finance
MGT 1350H Marketing
MGT 1382H Statistics for Management

2000 Level

MGT 2000H Research Project
MGT 2001H Research Project (quarter course)
MGT 2002Y Research Project
MGT 2003H Research Project
MGT 2005H Advanced Concepts in Strategic Management
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 Technology Strategy
MGT 2018H Special Topics in Strategic Management
MGT 2019H Special Topics in Strategic Management
MGT 2027H Business Law
MGT 2050H Technology/Management Interface
MGT 2051H Assessing the Business Government Landscape
MGT 2052H Management Consulting
MGT 2053H Organizational Strategy
MGT 2054H Technology Strategy
MGT 2056H Game Theory and Competitive Strategy
MGT 2057H Venture Capital
MGT 2058H Case Analysis and Presentation
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 2085H 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 2122H Business and the Regulatory Environment
MGT 2216H Special Topics in Accounting
MGT 2127H Economic Environment of International Business
MGT 2128H Real Estate Economics
MGT 2129H Forecasting Models and Econometric Methods
MGT 2200H Management Accounting
MGT 2202H Planning and Control Systems
MGT 2203H Financial Accounting
MGT 2204H Canadian Tax Practice
MGT 2215H Special Topics in Accounting
MGT 2300H Corporate Financing
MGT 2301H Financial Management
MGT 2302H Security Analysis and Portfolio Management
MGT 2303H Interactive Financial Modelling
MGT 2304H Financial Institutions and Capital Markets
MGT 2305H International Financial Management
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 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 2515H Special Topics in Marketing
MGT 2516H Special Topics in Marketing
MGT 2517H Special Topics in Marketing
MGT 2518H Special Topics in Marketing
MGT 2519H Special Topics in Marketing
MGT 2520H Special Topics in Marketing
MGT 2601H Organization Design
MGT 2604H Organization Change and Development
MGT 2605H International Organizational Behaviour
MGT 2606H Designing New Work Organizations
MGT 2607H Managerial Negotiations
MGT 2608H Management of the Personnel Function
MGT 2609H Management of Human Resources
MGT 2610H Industrial Relations
MGT 2611H Not-for-Profit Consulting
MGT 2613H Leadership
MGT 2614H Top Manager's Perspective
MGT 2615H Special Topics in Organizational Behaviour
MGT 2703H Technology of Information Systems
MGT 2704H Information Technology Management
MGT 2705H Information Systems Design
MGT 2706H Electronic Commerce and the Internet
MGT 2715H Special Topics in Information Systems
MGT 2800H Management Science
MGT 2801H Management Decision Analysis
MGT 2802H Computer Modelling and Simulation
MGT 2804H Multivariate Methods for Management
MGT 2910H Learning How to Learn
MGT 2911H Integrative Management Challenge
MGT 2915H Multidisciplinary Special Topics
MGT 2916H Multidisciplinary Special Topics
MGT 2917H Multidisciplinary Special Topics

JURIS DOCTOR/MASTER OF BUSINESS ADMINISTRATION PROGRAM

www.rotman.utoronto.ca/degree/jdmba.htm

The J.D./M.B.A. Program is a four-year combined degree offered by the Faculty of Law and the Rotman School of Management at the University of Toronto. The program is for students who wish to combine graduate training in management with a degree in law.

At the completion of the four-year integrated program, the successful student is awarded both the Juris Doctor and the Master of Busi-

ness Administration degrees, which, if taken separately, would require five years of study.

Admission Requirements

Applicants to the J.D./M.B.A. program must be admitted to both the Faculty of Law and the Rotman School of Management. As such, candidates must satisfy the admission requirements of both faculties independently, and all applicants must complete the Law School Admission Test (LSAT) and the Graduate Management Admission Test (GMAT). A separate application to each Faculty must also be submitted.

Rotman admission criteria are the same as those for the Full-time M.B.A. program, with the following exception: although work experience is not a requirement, it is important to note that the average M.B.A. student has five years' experience. It is expected that J.D./M.B.A. applicants' academic and personal background reflects diversity and life experience.

Students who have completed the first year of the J.D. program may apply for admission to the combined J.D./M.B.A. program by meeting the normal application and admission requirements for the M.B.A. program and notifying their faculty registrar.

Since enrolment in the J.D./M.B.A. program is limited, candidates are urged to file both applications by the Faculty of Law deadline and to arrange to complete their applications as soon as possible thereafter.

Program Requirements

1 Students in the combined program spend the first year enrolled in the first year of the J.D. program and must obtain at least a B standing to continue in the program.

2 Students spend the second year of the combined program enrolled in the first year of the M.B.A. program and must obtain at least a B+ standing upon the completion of courses to be eligible to continue in the program.

3 During the final two years of the program, students take courses drawn from both Law and Management. Students must complete 6 courses at the Rotman School of Management and 45 credits at the Faculty of Law (in addition to the J.D. requirements to complete a Moot, a Perspective course, and the Extended Writing Requirement).

BACHELOR OF APPLIED SCIENCE/MASTER OF BUSINESS ADMINISTRATION PROGRAM

www.rotman.utoronto.ca/skoll/index.htm

The Jeffrey Skoll B.A.Sc./M.B.A. program, established by the Faculty of Applied Science and Engineering and the Rotman School of Management, provides a fast track for gifted students to earn their bachelor's degree in engineering, a management internship, and an M.B.A. in five years and eight months.

Admission Requirements

Students in third year in the Faculty of Applied Science and Engineering (all programs) are eligible to apply for the combined Engineering/M.B.A. degree program. All admission documents required by the Rotman School of Management (including the GMAT results) should be submitted to the Office of Admissions, Faculty of Applied Science and Engineering, by October 15 of the fall session, third year (or while on PEY immediately following third year).

Candidates for the combined program must demonstrate a minimum of a B+ (77%) average in each of the following four sessions: 1W, 2F, 2W, 3F. (Students with one session slightly below 77% who meet all other entrance parameters should still apply.)

Program Requirements

1 Students in the combined program spend the first four years in the Faculty of Applied Science and Engineering (and apply to the program during the third year of undergraduate study).

2 Students spend the fifth year of the combined program enrolled in the first year of the M.B.A. program and must meet the promotion standards applicable to full-time M.B.A. students.

3 During the sixth year of the program, students must complete seven 2000-level courses at the Rotman School of Management, two engineering electives, and a required technology-management course.

4 All students are required to complete a Management Experience Year (MEY). Consult the Faculty of Applied Science and Engineering for detailed MEY requirements.

EXECUTIVE MASTER OF BUSINESS ADMINISTRATION PROGRAM

www.rotmanemba.ca

Admission to the Executive M.B.A. program is restricted to applicants with significant professional work or managerial experience. Candidates are considered under the general regulations of the School of Graduate Studies. Applicants must also obtain either a satisfactory score for the Executive Diagnostic Tool (EDT) or the Graduate Management Admissions Test (GMAT). For further details, please refer to the Web site or contact the program office.

The M.B.A. for Executives is offered on Fridays and Saturdays every other week plus four week-long residential modules and study periods. The program consists of 10 half-courses offered first session and 12 half-courses offered second session. The total duration of the M.B.A. for Executives program is 13 months. Note that special program fees apply for this program. One or more of the course(s) may be substituted by course(s) offered in the regular M.B.A. program at the discretion of the Academic Director.

To learn more about the Rotman M.B.A. for Executives, visit the Web site www.rotman.utoronto.ca/execprog/emba/emba.htm or call (416) 978-4441.

Courses of Instruction

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 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 PROGRAM

www.rotman.utoronto.ca/gemba

The Global Executive M.B.A. "Omnium" program is an alternative option to the Executive M.B.A. program offered by the Joseph L. Rotman School of Management. This program is for executives who want to participate in an internationally focused business program. The intensive cross-cultural curriculum provides participants with a deep understanding of global business, and it provides the knowledge and tools needed to successfully develop and implement global strategies.

Admission to the Global Executive M.B.A. program is restricted to applicants with significant professional work or managerial experience. Candidates are considered under the general regulations of the School of Graduate Studies. Applicants must also obtain either a satisfactory score for the Executive Diagnostic Tool (EDT) or the Graduate Management Admissions Test (GMAT). For further details, please refer to the Web site or contact the program office.

The program is offered in 4 international modules over a 16-month period. Modules consist of three intensive weeks at each of the four locations: Toronto, Canada; Switzerland; China; and South America. The curriculum is closely aligned with the courses offered in the Executive M.B.A. program. The program starts with online learning components to allow participants to develop a foundation in these subjects and to close any skill gaps resulting from different educational backgrounds. Between modules, participants continue their ' academic work by utilizing our electronic learning tools. After successfully completing all modules, participants receive the M.B.A. degree from the University of Toronto.

To learn more about the Global Executive M.B.A. program, visit the Web site www.rotmangemba.ca or call (416) 978-5706.

Courses of Instruction

MGT 5001H Strategy 1: Global Strategic Management 1
MGT 5002H Strategy 2: Corporate Strategy
MGT 5004H Personal Leadership 2: 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 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 5402H	Managing IT in Global Organizations
MGT 5501H	Marketing: Creating Customer Value (Marketing)
MGT 5601H	Organizational Leadership 1: Global Team Leadership
MGT 5602H	Organizational Leadership 2: Negotiation
MGT 5801H	Quantitative Reasoning for Managers
MGT 5901H	Technology Innovation

DEGREE OF MASTER OF MANAGEMENT AND PROFESSIONAL ACCOUNTING

Address:
Room K108, Kaneff Centre
University of Toronto at Mississauga
3359 Mississauga Road North
Mississauga, Ontario
Canada L5L 1C6

Telephone: (905) 828-3985
Fax: (905) 569-4306
E-mail: mmpa@rotman.utoronto.ca
Web: www.rotman.utoronto.ca/mmpa

The M.M.P.A. 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 program covers the core courses of the Rotman M.B.A. program and offers specialization in accounting.

The 27-month program covers 7 sessions of full-time study, including 5 academic study sessions and 2 co-op work placement sessions in accounting- or finance-related environments. The curriculum is organized to provide an excellent understanding of:

1 the functions and needs of management,
2 accounting, finance, auditing, and tax,
3 essential professional subjects,
4 management skills, and
5 professional capabilities.

Students from any undergraduate background may apply. Advanced standing may be granted.

Admission Requirements

The admission requirements for the M.M.P.A. are essentially the same as those for the School's M.B.A. program except as noted in the program brochure.

Program Requirements

1 Except for candidates granted advanced standing on admission, the program covers the equivalent of seven sessions.
2 The program of study consists of all the courses set out below, except that students may choose to take either MGT 2070H or MGT 2208H in their final academic session.
3 All requirements for the degree must be completed within six years from the date of first enrolment.
4 All courses are composed of one, two, or three modules. A module is five weeks in duration and the course weight is equal to the number of modules. For example a course with three modules will have a weight of three credit hours.

Courses of Instruction

Notations for all courses are indicated in parenthesis following the course code and are determined as follows:

Credit hours	Notation
0	CR/NCR (CrediVNo Credit)
1	one module
2	two modules (half-course)
3	three modules

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

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

MGT 1362H(3) Managing People in Organizations
MGT 1382H(3) Statistics for Management
MGT 2004H(3) Advanced Concepts in Strategic Management
MGT 2014H(2) The Legal Environment of Professions and Corporations
MGT 2070H(1) Management Consulting
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 Ill
MGT 2224H(2) Computer Auditing
MGT 2225H(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

The final session of the program will include a professional integrating experience consisting of a four-week period in which students will complete one or more of the following:
1 attend the professional school of a professional accounting body, or
2 write professional accounting examinations, or
3 complete a consulting or work-term project.

DEGREE OF DOCTOR OF PHILOSOPHY
The Rotman School offers the Ph.D. degree in Management. At present, students may specialize in one of six fields:
1 accounting
2 finance
3 human resource management and organizational behaviour
4 marketing
5 operations management
6 strategic management
Other areas are available for selection as the minor field in Management, including international business.

Admission Requirements
1 Candidates for the degree of Doctor of Philosophy are admitted under the general regulations.
2 Since Management is a multidisciplinary field, candidates are expected to acquire a breadth of knowledge across each of these disciplines, as well as some depth in the cognate disciplines relevant to their field of specialization. Sometimes these requirements can be satisfied prior to entry to the Ph.D. program (for example, through an M.B.A. degree 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 Ph.D. program, then the candidate is expected to complete the program in four years. If additional course work is required, then the candidate may need to spend an additional year in the program.
3 The applicant should have three individuals submit letters of reference to the faculty.
4 The applicant should have official scores on the GMAT or GRE submitted to the faculty.
5 The applicant should submit a letter to the faculty describing her or his interests and reasons for seeking doctoral education.

Program Requirements
1 Candidates should spend the first two years of the program on campus, registered as full-time students. During this time, they are normally expected to complete their course work. At the end of this period, they are expected to take the comprehensive examination.
2 The program consists of a major field and two minor fields of study.
3 A minimum of two full courses (four half-courses) will comprise the major field. These will normally be taken from the Management courses at the 3000 level, but additional courses from other departments may be required.
4 The two minor fields are usually taken in cognate departments. Each minor field comprises at least one full course (two half-courses).
5 In order to gain exposure to the breadth of the M.B.A. program, three courses from the following list or their equivalents are required:
MGT 1221H Accounting I or
MGT 1222H Managerial Accounting
MGT 1241H Operations Management
MGT 1301H Fundamentals of Strategic Management
MGT 1330H Business Finance
MGT 1350H Marketing

MGT 1362H Managing People in Organizations

The three courses are to be chosen in consultation with the Area Ph.D. 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 M. B.A. distribution requirements in the Ph. D. program were suspended for two years. All students registered at that time and newly admitted students for 2004-2005 and 2005-2006 will not be subjected to the M.B.A. distribution requirements. In the meantime, an alternate suitable replacement that meets the objective of the M.B.A. distributions will be explored.

6 A candidate is expected to be qualified in the three basic disciplines essential to the study of Management: economics, behavioural science, and quantitative analysis/statistics.

7 Upon completion of the courses in the major and minor fields, the candidate is expected to pass comprehensive examinations in the major field.

8 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 of Instruction

The Department should be consulted each session as to course offerings.

Courses normally restricted to Ph. D. 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

COLLABORATIVE PROGRAMS

The Department participates in the following collaborative programs:

1 Asia-Pacific Studies
2 Environmental Studies
3 Management and Economics

For details, consult the separate entries in this Calendar.

Management and Economics (Collaborative Program)

Program Committee
H. D. Benjamin, BSc, MA, PhD/Economics
P. H. Pauly, MA, PhD/Management

Collaborative Ph.D. Program in Management and Economics
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:
1 developing a basic understanding in one of the core areas of management (accounting, economics, finance, marketing, operations management, organizational behaviour).
2 developing an in-depth understanding of economics and econometrics (Ph.D.-level work); and
3 carrying out Ph.D.-level work in one of the areas of management.

At present, only finance is available in the collaborative program.

Candidates 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. Admission to the program is by permission of the graduate coordinators in both Economics and Management. Prospective candidates should apply either to the Department of Economics or the Rotman School of Management; however, they must meet the Ph.D. admission requirements of the home department.

Materials Science and Engineering MMS

Graduate Faculty

Full Members

S. A. Argyropoulos, MEng, PhD, PEng
G. Bendzsak, BSc, MSc, PhD, PEng
T. Coyle, BSc, BA, ScD
U. E. Erb, Diplng
M. D. Grynpas, MSc, PhD
D. Landheer
J. D. Lavers, BSc, MASc, PhD, FIEEE, PEng
Z. H. LU, BSc, MSc, PhD
J. Nogami, BASc, MASc, PhD
T. H. North, BSc, MSc, PhD
V. Papangelakis, DipEng, MEng, PhD
D. D. Perovic, BASc, MASc, PhD
R. M. Pilliar, BASc, PhD, PEng
H. E. Ruda, BSc, PhD
I. D. Sommerville, BSc, PhD, ARCS
J. Thorpe, BASc, MASc, PhD
T. A. Utigard, BSc, MASc, PhD, PEng
Z. Wang, BEng, MSc, PhD
(Coordinator of Graduate Studies)
R. L. Williams, BASc, PhD

Members Emeriti

K. T. Aust, BASc, MASc, PhD
B. Cox, BA, MA, PhD
U. M. Franklin, PhD, LLD, DSc, DDN, CC, FRSC, University Professor Emeritus
A. Mclean, BSc, PhD, PEng
B. Ramaswami
J. W. Rutter

Associate Members

G. E. Agar, BASc, ScD
R. A. Bergman, BASc, MASc, PEng
G. D. Hibbard, BASc, PhD
G. Palumbo, BASc, MASc, PhD

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Web: www.ecf.utoronto.ca/apsc/mms/

Degree candidates are accepted under the general regulations. In addition, the Department requires a TOEFL (Test of English as a Foreign Language) score of at least 580 from students whose primary language is not English. The TOEFL must include the TWE (Test of Written English), and students must normally obtain a minimum score of 4.

Graduate courses and research opportunities are offered to qualified candidates 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.

Degree of Master of Engineering

Candidates are accepted under the general regulations. A candidate will enrol in a field of study in consultation with a designated professor who will act as supervisor throughout the candidate's program. For students with adequate undergraduate preparation, the normal program will include 10 half-courses; a project may be substituted for 3 half-courses. The project must be presented at an oral examination.

Degree of Master of Applied Science

Candidates for this degree are accepted under the general regulations. The program of study will normally include four half-courses, including the M.A.Sc. Graduate Research Seminar, and a thesis. The course work normally selected will include the departmental seminar, which is a half-year course, and three half-courses, one of which would normally be taken inside the Department. The required thesis is based upon research work carried out in the Department in the fields of chemical or physical metallurgy or materials science. The thesis must be presented at an oral examination.

Degree of Doctor of Philosophy
Candidates for this degree will normally be expected to have completed the master's program before entering the Ph.D. program. The program of study normally will include four half-courses, including the Ph.D. Graduate Research Seminar, and a thesis. The major subject in a program will be chemical metallurgy, physical metallurgy, or materials science. One of the three half-courses would normally be taken inside the Department. The required thesis is based upon research work carried out in the Department in the fields of chemical or physical metallurgy or materials science.

Within 12 months of initial enrolment in the Ph.D. program, all candidates must pass a general qualifying examination based on the course material taken within the Department and on background knowledge in the candidate's field of specialization.

Program Transfer
Very strong M.A.Sc. candidates may apply to transfer to the Ph.D. program after completing one year of the M.A.Sc. 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 Ph.D. Graduate Research Seminar in addition to the four courses completed in the M.A.Sc. program.

Collaborative Programs
The Department of Materials Science and Engineering participates in the following collaborative programs:
1 Biomedical Engineering
2 Environmental Engineering
3 Integrated Manufacturing
For details on these programs, please consult the separate entries in this Calendar.

Courses of Instruction
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/Staff
MMS 1000H° Graduate Research Seminar M.A.Sc./Staff
MMS 1013H Growth and Characterization of Semiconductors/H.E. Ruda
MMS 1014H Interfacial Phenomena/Staff
MMS 1015H Mechanical Properties of Solids I/ *Z.* Wang
MMS 1016H Mechanical Properties of Solids II/Z. Wang
MMS 1018H Phase Transformations/Staff
MMS 1020H Environmentally Induced Cracking/Staff
MMS 1022H Special Topics in Materials Science IIStaff
MMS 1023H Special Topics in Materials Science II/Staff
MMS 1024H Interface and Nanophase Engineering/Staff
MMS 1025H Non-Crystalline Solids/S. J. Thorpe
MMS 1026H Analytical Electron Microscopy/ D. D. Perovic
MMS 1027H Finite Element Analysis and Design of Metallurgical Systems/ G. Bendzsak
MMS 1028H Advanced Materials Science/ Z. H. Lu
MMS 2000H° Graduate Research Seminar Ph.D./Staff
MMS 2013H Materials and Manufacturing/Staff
JMZ 1704H Polymer Process Engineering/ Staff
JTC 1020H Ceramics/T: W Coy/e
JTC 1331H Biomaterials Science/Staff

Metallurgy
MMS 1000H° Graduate Research Seminar M.A.Sc./Staff
MMS 2000H° Graduate Research Seminar Ph.D./Staff
MMS 2006H Molten Salt Electrolysis/T. A. Utigard
MMS 2007H Iron and Steel Making—selected topics/A. McLean
MMS 2008H High Temperature Metallurgical Fluids/T: A. Utigard
MMS 2014H Non-Ferrous Extraction Metallurgy/Staff
MMS 2017H Welding Metallurgy/T: H. North

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

MMS 2018H Welding Processes and Testing/ Staff
MMS 2020H Mathematical Modelling in Materials Processing/S. A. Argyropoulos
MMS 2022H Special Topics in Metallurgy I/ Staff
MMS 2023H Special Topics in Metallurgy II/ Staff

Mathematical Finance MMF

Graduate Faculty

Full Members

R. F. Almgren, BS, MS, PhD (Director)
D. E. Cormack, BASc, MASc, PhD, FCIC, PEng
A. Feuerverger, BSc, PhD
K. R. Jackson, BSc, MSc, PhD
R. H. Kwon, BA, MS, PhD
T. H. McCurdy, BA, MA, PhD
J. Quastel, BSc, MS, PhD

Associate Members

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J. Maheu, BA, MA, PhD
J. Pilling, BSc, MMF
G. Pugh, BA, MA, PhD
D. Rosen, BASc, MASc, PhD
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H. J. H. Tuenter, BSc MSC, PhD

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The master's degree program in Mathematical Finance was developed to respond to the rapidly changing demands in the financial services industry. The program is multidisciplinary, drawing upon the expertise of the Faculties of Applied Science and Engineering, Arts and Science, and Management. As a fully integrated course of study, it is a computationally intensive program designed to provide a strong academic education within the practical framework of applied finance. Note that special tuition conditions apply for this program.

More information about the program and courses is available on the Web site or from the Program Director.

Degree of Master of Mathematical Finance

Admission Requirements

1 Candidates will be admitted under the general regulations of the School of Graduate Studies. To be considered for admission, 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). Candidates must attain a score of at least 580/237 on the TOEFL with 5.0 on the TWE.

2 Applicants must also show evidence of strong mathematical ability. Appropriate workplace experience will be considered in lieu of formal education.

3 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. In all cases, candidates must satisfy the admissions committee of their ability to do rigorous quantitative analysis at an advanced level.

4 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

1 The program of study begins in mid-August and will normally extend over twelve consecutive months during which the student is full-time.

2 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.

3 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 de-

signed 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.
4 In addition to successful completion of all courses listed below, a course in Practical Risk Management must be completed in order to qualify for the degree.

Courses of Instruction
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 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 1925H Statistics for Finance II
MMF 1926H Workshop in Mathematical Finance
MMF 1927H Workshop in Mathematical Finance
MMF 1941Y° Stochastic Analysis
MMF 1943Y° Communication
MMF 1952Y° Pricing Theory
MMF 2000H Risk Management
MMF 2011H Partial Differential Equations and Finite Difference Methods
MMF 2012H Volatility Modelling and Forecasting
MMF 2021H Numerical Methods for Finance

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

Mathematics MAT

Graduate Faculty

Full Members

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E. Bierstone, BSc, MA, PhD, FRSC
I. Binder, BSc, MS, PhD
J. S. Bland, BSc, MSc, PhD (Chair)
T. Bloom, BSc, MA, PhD, FRSC
R. Buchweitz, Dipl, DrRerMat
M. D. Choi, BSc MSc, PhD, FRSC
J. Colliander, BSc PhD
C. Consani, BS, MS PhD
S. A. Cook, BS, AM, PhD, FRSC, FRS, University Professor
A. Del Junco, BSc, MSc, PhD
N. A. Derzko, BSc, PhD
G. A. Elliott, BSc, MSc, PhD, FRSC
J. B. Friedlander, BSc, MA, PhD, FRSC
M. Goldstein
I. R. Graham, BSc, PhD
K. Hori, BSc, MSc, PhD
V. Ivrii, PhD, DSC, FRSC
L. C. Jeffrey, AB, MA, PhD
R. Jerrard, AB, PhD
V. Jurdjevic, BS, MS, PhD
M. Kapranov, MSc, PhD, Mossman Chair
Y. Karshon, BSc, MSc,PhD
B. Khesin, MSc, PhD
A. Khovanskii, PhD, DSc
H. Kim, BSc, PhD
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M. Lyubich, MS, PhD
R. McCann, BS, PhD
E. Meinrenken, Dipl, PhD
E. Mendelsohn, BSc, MSc, PhD
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P. Milman, MA, PhD, FRSC
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V. Murty, BSc, PhD, FRSC
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A. Nachman, BSc, MA, PhD
M. Pugh, BA, PhD
J. Quastel, BSc, MS, PhD
J. S. Repka, BSc, PhD
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C. Sulem, MSC, DrDEtat (Coordinator of Graduate Studies)
F. D. Tall, AB, PhD
S. M. Tanny, BSc, PhD
S. Todorcevic, MSc, PhD
B. Virag, MA, PHD, BA
W. A. Weiss, BSc, MSc, PhD
M. Yampolsky, MSc, PhD

Members Emeriti

M. A. Akcoglu, MSc, PhD, FRSC
D. F. Andrews, BSc, MSc, PhD, Fellow ASA
E. J. Barbeau, BA, MA, PhD
C. Davis, BS, MA, PhD
H. C. Davis
E. W. Ellers
D. A. S. Fraser, BA, MA, MA, PhD, DMath, FRSC
L. Gardner, BA, MA, PhD
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J. S. Halperin, BSc, MSc, PhD, FRSC
W. Haque, MA, MS, PhD
I. Kupka
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D. R. Masson
J. McCool, BSc, PhD
K. Murasugi
K. B. Ranger, BSc, PhD, FRSC
P. G. Rooney
D. K. Sen, MSc, DSc
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F. A. Sherk
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Associate Members

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The Department of Mathematics offers opportunities for research in the fields of pure mathematics and applied mathematics, including, but not restricted to, the fields of real and com-

plex 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, cryptography, 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.

Degree of Master of Science

Candidates are accepted under the general regulations. Candidates must also show evidence of an excellent academic background and mathematical ability.

Candidates are accepted into a 12-month, 16-month, or 24-month program for the degree of Master of Science. It is also possible to earn the M.Sc. degree through part-time studies.

Candidates for the 12-month program are required either (a) to take and pass three approved full-year courses and to take a supervised research project for M.Sc. students (MAT 4000Y), or its equivalent, or (b) to take and pass two approved full-year courses 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 course of the program. Students may, with approval, take courses outside the Department as part of a coherent program.

Candidates 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.

Candidates who study part-time for the M.Sc. must (at a minimum) satisfy the requirements of the 12-month program.

Degree of Doctor of Philosophy

Candidates for this degree must normally have a master's degree from a recognized university. However, exceptionally strong B.Sc. students may apply for direct admission to the Ph.D. program. In all cases candidates 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.

The Ph.D. program normally takes four years of full-time study to complete. Candidates must complete at least six half-courses (or the equivalent combination of half-year and full-year courses). Candidates are required to 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 Ph.D. 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. Candidates 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. Candidates are also required to pass a specialist oral examination or to 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. This will embody original research of a standard that warrants publication in the research literature.

Courses of Instruction

Each year the Department offers a selection of courses chosen from the following list, with the possibility of further additions. The core courses, MAT 1000Y, 1001H, 1100Y, 1300Y, will be offered each year; the complete list of courses will be available from the Department in May. In addition, it may be possible for a student to arrange to take one of the listed courses as an individual reading course. Students should consult the office of the Coordinator at the start of the academic year.

Ph.D. students are expected to attend and contribute to seminars in the research areas.

Mathematics

MAT 1000Y Real Analysis
MAT 1001H Complex Analysis
MAT 1002H Topics in Complex Variables
MAT 1003H Theory of Several Complex Variables
MAT 1004H Theory of Approximation

MAT 1005H Fourier Analysis
MAT 1006H Topics in Real Analysis
MAT 1008H Functions of a Complex Variable
MAT 1010H Functional Analysis
MAT 1011H Introduction to Linear Operators
MAT 1012H Real Analysis II
MAT 1013H Theory of Several Complex Variables II
MAT 1015H Topics in Operator Theory
MAT 1016Y Topics in Operator Algebras
MAT 1017H Introduction to K-theory for Operator Algebras
MAT 1034H Topics in Harmonic Analysis
MAT 1035H C* Algebras
MAT 1037H Von Neumann Algebras
MAT 1044H Potential Theory
MAT 1045H Topics in Ergodic Theory
MAT 1051H Introduction to Ordinary Differential Equations
MAT 1052H Topics in Ordinary Differential Equations
MAT 1060H Partial Differential Equations
MAT 1062H Topics in Partial Differential Equations I
MAT 1063H Topics in Partial Differential Equations II
MAT 1075H Differential Analysis
MAT 1100Y Algebra
MAT 1101H Topics in the Theory of Groups
MAT 1103H Topics in Algebra I
MAT 1104H Topics in Algebra II
MAT 1109H Classical Groups
MAT 1110H Algebraic Groups
MAT 1120H Lie Groups and Lie Algebras I
MAT 1121H Lie Groups and Lie Algebras II
MAT 1122H Lie Groups and Representations I
MAT 1124Y Topics in Matrix Theory
MAT 1126H Lie Groups and Fluid Dynamics
MAT 1155H Commutative Algebra
MAT 1190H Algebraic Geometry
MAT 1191H Topics in Algebraic Geometry
MAT 1194H Algebraic Curves
MAT 1195H Elliptic Curves and Cryptography
MAT 1196H Representation Theory
MAT 1197H Automorphic Forms and Representation Theory I
MAT 1198H Automorphic Forms and Representation Theory II
MAT 1199H Automorphic Forms
MAT 1200H Algebraic Number Theory
MAT 1202H Analytic Number Theory
MAT 1203H Computational Aspects of Number Theory
MAT 1210H Topics in Number Theory
MAT 1299H Point Set Topology
MAT 1300Y Topology
MAT 1302H Combinatorial Theory
MAT 1303H Combinatorial Designs
MAT 1309H Geometrical Inequalities
MAT 1312H Topics in Geometry
MAT 1313Y Seminar in Geometry
MAT 1314H Introduction to Noncommutative Geometry
MAT 1340H Differential Topology
MAT 1341H Differentiable Manifolds and Applications
MAT 1342H Introduction to Differential Geometry
MAT 1343H Riemannian Manifolds
MAT 1344H Symplectic Geometry
MAT 1345H Basic Algebraic Topology
MAT 1346H Homotopy Theory
MAT 1347H Topics in Sympletic Geometry and Topology
MAT 1350H Topics in Algebraic Topology I
MAT 1351H Topics in Homotopy Theory
MAT 1352H Topics in Algebraic Topology II
MAT 1355H Singularity Theory
MAT 1359H Moduli Spaces of Flat Connections
MAT 1360H Complex Manifolds
MAT 1392H Algebra Seminar
MAT 1399H Advanced Point Set Topology
MAT 1403H Model Theory
MAT 1404H Introduction to Model Theory and Set Theory
MAT 1430H Set Theory
MAT 1435H Infinitary Combinatorics
MAT 1436H Large Cardinals, Structure Theory of Ideals and Applications
MAT 1448H Topics in Set Theoretic Topology
MAT 1449H Seminar in Foundations
MAT 1450H Topics in Foundations
MAT 1499H Teaching Large Mathematics Courses (Credit/No Credit)

Applied Mathematics

MAT 1500Y Applied Analysis
MAT 1501H Equations and Variational Calculus
MAT 1502H Dynamical Systems and Stochastic Analysis
MAT 1507H Asymptotic and Perturbation Methods
MAT 1508H Techniques of Applied Mathematics
MAT 1520H Wave Propagation
MAT 1525Y Inverse Problems of X-Ray and Radar Imaging
MAT 1638H Fluid Mechanics
MAT 1639Y Topics in Fluid Mechanics
MAT 1700H General Relativity
MAT 1705H Foundations of Classical Mechanics
MAT 1710H Group Theory and Quantum Mechanics
MAT 1711H Topics in Quantum Mechanics

MAT 1722H	C* Algebras and Quantum Mechanics
MAT 1723H	Foundations of Quantum Mechanics
MAT 1724H	Functional Analysis in Quantum Mechanics
MAT 1725Y	Scattering Theory
MAT 1739H	Topics in Mathematical Physics
MAT 1750H	Computational Mathematics
MAT 1760H	Computer Algebra
MAT 1761H	Algorithms in Algebraic Geometry
MAT 1839H	Optimization and Control
MAT 1840H	Control Theory
MAT 1843H	Mathematics of Pattern Recognition
MAT 1844H	Nonlinear Dynamical Systems
MAT 1845H	Dynamical Systems
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 Pure 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

M.Sc. Project

MAT 4000Y+	Supervised Research Project

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

Mechanical and Industrial Engineering MIE

Graduate Faculty

Full Members

N. Ashgriz, BSc MSc, PhD
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R. Ben Mrad, BS, MSc, PhD
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M. W. Carter, BMath, MMath, PhD
S. Chandra, BTech, MS, PhD
M. H. Chignell, BSc, MSc, PhD
W. L. Cleghorn, BASc, MASc, PhD, PEng
M. P. Consens, BEng, MSc, PhD
C. R. Ethier, BSc, MMath, SM, PhD, PEng, Canada Research Chair
G. R. Fernie, BSc, PhD, PEng, CCE
M. S. Fox, BSc, PhD, FAAAI, FCIAR, NSERC Industrial Research Chair in Enterprise Integration
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V. Makis, MSC, PhD
A. Mandelis, BSc, MA, MSc, PhD, FAPS
S. McCahan, BS, MS, PhD
S. A. Meguid, BME, MSc, PhD, Wallace G. Chalmers Chair of Engineering Design
P. Milgram, BASc, MSEE, PhD, PEng
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M. R. Popovic, MSc, MASc, PhD
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R. Sauve
H. L. Shu, BS, SM, PhD
C. Simmons, BSc(Eng), SM, PhD
A. N. Sinclair, BASc, MSE, PhD, PEng (Chair)
J. K. Spelt, BASc, MASc, ME, PhD, PEng
P. E. Sullivan, BSME, MSME, PhD (Coordinator of Graduate Studies)
Y. Sun, BS, MS, PhD
M. J. Thomson, BEng, MSc, PhD
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J. J. Vicente, BASc, MS, PhD
J. S. Wallace, BSME, BA, MSE, PhD, PEng
J. ZU, BEng, MEng, PhD, PEng

Members Emeriti

A. H. Abdelmessih, BME, MS, PhD, PEng
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I. G. Currie, BSc, MASc, PhD, FCSME, PEng
R. G. Fenton, Diphg, PhD
P. J. Foley
F. C. Hooper
D. F. James, BSc, MA, MS, PhD, PEng
J. F. Keffer, BASc, MASc, PhD
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Associate Members

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I. Dincer
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Qualified candidates are accepted 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, technology-society studies, and other related topics. In addition, the Department of Mechanical and Industrial Engineering participates with other graduate units to offer the following collaborative programs within the University:

1 Biomedical Engineering
2 Environmental Engineering
3 Integrated Manufacturing
4 Knowledge Media Design
5 Wood Products Engineering

Details of each of these programs are described in separate entries in this calendar.

Degree Programs

A brief outline of the available degree programs and admission requirements is given below. Further details may be obtained from the Mechanical and Industrial Engineering Graduate Studies Office or the current booklet, *Graduate Studies in Mechanical and Industrial Engineering.*

Students registered in a graduate degree program, which involves research, are required to participate in the non-credit seminar course JDE 1000H *Ethics in Research* during their first or second session of registration.

Degree of Master of Applied Science

This degree program provides candidates with an opportunity to pursue research-intensive advanced studies in a particular field of interest. At the beginning of each candidate's program, a professor in the Department will be identified as the supervisor. In consultation with the supervisor, each candidate will prepare a program of study which must be approved by the Department. For students with an adequate undergraduate background, the program will normally consist of five graduate half-courses and a thesis.

Applicants for the Master of Applied Science program or the Master of Engineering program 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. Additional factors considered in assessing applicants are 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.

Degree of Master of Engineering

This program is designed for candidates preparing for advanced professional activity; it is not a research-oriented degree. The program normally requires a total of 10 half-courses, or 7 half-courses 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. Admission requirements are the same as those listed above for the Master of Applied Science students.

Degree of Doctor of Philosophy

This program is for students who are planning a career in which they will be performing or directing research at the most advanced level.

Candidates for this degree must normally have a master's degree from a recognized university. Admission to a Ph.D. program is reserved for those who are able to present evidence of superior academic and research ability. Exceptionally strong bachelor's students may apply directly to a Ph.D. program.

At the beginning of each candidate'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. Ph.D. candidates must meet the minimum departmental standard in course work. For students with an appropriate background, the program will normally consist of five half-courses and a thesis. Two of the five half-courses must be core courses selected from the list below. Students admitted directly to a Ph.D. program with a bachelor's degree are required to complete eight half-courses (two must be core courses) plus a thesis. Ph.D. candidates 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.

Each Ph.D. candidate must pass a qualifying examination, a seminar presentation, additional annual progress meeting, the departmental Ph.D. oral examination, and the SGS Ph.D. final oral examination.

Program Transfer

Very strong M.A.Sc. candidates may apply to transfer to the Ph.D. program after completing only one year of the M.A.Sc. program. Regulations governing such transfers are available in the Mechanical and Industrial Engineering Graduate Studies Office. A student who is permitted such a transfer must complete a total of eight half-courses in the graduate program.

English Language Facility

When proof of English language facility is required for admission, candidates must attain a score of at least 237 on the computer-based TOEFL or 580 on the paper-based TOEFL (Test of English as a Foreign Language) and 4.0 on the TWE (Test of Written English). A score of 85 or better from MELAB (Michigan English Language Assessment Battery) or 7.0 or better from IELTS (international English Language Testing System) is also acceptable.

Courses of Instruction

See the departmental graduate office for a schedule of available courses.

Core Courses

MIE 1001H Dynamics II/J. W. Zu
MIE 1101H Thermodynamics II/C. A. Ward
MIE 1201H Fluid Mechanics Ill/I. G. Currie
MIE 1301H Solid Mechanics/W. L. Cleghorn
MIE 1501H Information Systems I: Data and Knowledge Modelling/M. S. Fox
MIE 1801H Engineering Analysis Ill/ A. Mandelis
JEI 1901H Technology, Society, and the Environment I/W, H. Vanderburg (offered jointly with the Institute for Environmental Studies)

One of:
MIE 1403H Analytical Methods in Human Factors Research/P. Milgram
MIE 1406H Cognitive Work Analysis/ K. J. Vicente
MIE 1408H Theoretical Foundations of Human Factors/K. J. Vicente

One of:
MIE 1603H Integer Programming/ M. W. Carter
MIE 1607H Stochastic Modelling and Optimization/V. Makis

Robotics, Dynamic Systems and Controls

MIE 1001H Dynamics II/ J. W. Zu
MIE 1002H Dynamics III/Staff
MIE 1005H Theory of Vibrations I/ W. L. Cleghorn
MIE 1009H Applied Acoustics/D. L. Allen
MIE 1043H Control Systems II/Staff
MIE 1062H Robot Kinematics and Dynamics/ A. A. Goldenberg
MIE 1063H Introduction to Theoretical Kinematics/A. A. Goldenberg
MIE 1064H Control Analysis Methods with Applications to Robotics/ J. K. Mills
MIE 1066H Robot Mechanics and Control/ A. A. Goldenberg
MIE 1067H Automation System Design and Integration/A. Goldenberg
MIE 1068H Applied Nonlinear Control/ F. Ben Amara
MIE 1069H Introduction to Microsystems/ Y. Sun

Thermal Sciences

MIE 1101H Thermodynamics II/C. A. Ward
MIE 1102H Fuel Cell Kinetics/C. A. Ward
MIE 1107H Statistical Thermodynamics/ C. A. Ward
MIE 1109H Surface Phenomena/D. Li
MIE 1110H Nonequilibrium Thermodynamics/ C. A. Ward
MIE 1111H Conduction Heat Transfer/ A. Mandelis
MIE 1112H Advanced Topics in Conduction Heat Transfer/A. Mandelis
MIE 1113H Radiant Heat Transfer/ S. McCahan
MIE 1115H Heat Transfer with Phase Change/S. Chandra
MIE 1116H Design and Analysis of Heat Exchangers/Staff
MIE 1118H Partially Ionized Gases/ J. Mostaghimi
MIE 1122H Combustion Engine Processes/ J. S. Wallace
MIE 1123H Fundamentals of Combustion/ M. J. Thomson
MIE 1124H Combustion in I. C. Engines/ J. S. Wallace
MIE 1125H Advanced Topics in Combustion/ J. S. Wallace. S. Chandra

MIE 1126H Diffusion-Wave Fields: Mathematical Methods and Analytical Case Studies in the Thermal, Electronic and Biomedical Sciences/ A. Mandelis
MIE 1176H Optoelectronic Energy Conversion IIIA. Mandelis
MIE 1178H Direct Energy Conversion and Corrosion/Staff
JEL 1704H Introduction to Lasers/ A. Mandelis
MIE 511H Problems in Heat Transfer/Staff
MIE 513H Combustion and Incineration/ S. McCahan

Fluid Mechanics

MIE 1201H Fluid Mechanics III/I.G. Currie
MIE 1202H Fluid Mechanics IV/I.G. Currie
MIE 1203H Hydrodynamics/Staff
MIE 1206H Non-Newtonian Fluid Mechanics/ D. F. James
MIE 1207H Structure of Turbulent Flows/P. E. Sullivan
MIE 1209H Advanced Topics in Turbulent Flows/P.E. Sullivan
MIE 1210H Computational Fluid Mechanics and Heat Transfer/M. Bussmann
MIE 1211H Advanced Topics in Convection/ J. Mostaghimi
MIE 1212H Convective Heat and Mass Transfer/Staff
MIE 1213H Advanced Topics in Computational Fluid Dynamics/Staff
MIE 1220H Environmental Fluid Dynamics/ Staff
MIE 1221H Advanced Topics in Hydraulics/ Staff
MIE 1222H Multiphase Flows/ N. Ashgriz
MIE 1231H Introduction to Microfluidics/D. Li
MIE 1248H Hydraulics of Open Channels/ Staff
MIE 512H Air Pollution: Its Formation and Contro/M. J. Thomson
MIE 514H Atmospheric Pollution: Environmental Effects and Consequences/J. F. Keffer
MIE 519H Environmental Fluid Mechanics/ Staff
JMA 544H Air Pollution and Control/ J. F. Keffer

Applied Mechanics

MIE 1301H Solid Mechanics/A. N. Sinclair
MIE 1302H Elasticity/Staff
MIE 1303H Fracture Mechanics/ S. A. Meguid
MIE 1304H Fracture and Fatigue Engineering/R. D. Venter, D. McCammond
MIE 1307H Theory and Application of Elastic Plastic Fracture Mechanics/ A. N. Sinclair, B. Mukherjee
MIE 1340H Plasticity and Metalforming/ R. G. Fenton
MIE 1341H Plasticity I/R. G. Fenton, R. D. Venter
MIE 1344H Theory of Forming Processes/ Staff
MIE 1346H Viscoelasticity/D. McCammond
MIE 1355H Ultrasonic Non-Destructive Testing/A. N, Sinclair
MIE 1356H Laser/Thermal Wave Techniques in NDE/A. Mandelis

Human Factors/Ergonomics

MIE 1402H Experimental Methods in Human Factors Research/M. H. Chignell
MIE 1403H Analytical Methods in Human Factors Research/I Milgram
MIE 1404H Human Factors in Information Technology/M. H. Chignell
MIE 1405H Human Control of Telerobotic Systems/P. Milgram
MIE 1406H Cognitive Work Analysis/ K. J. Vicente
MIE 1407H Engineering Psychology and Human Performance/P. Milgram
MIE 1408H Theoretical Foundations of Human Factors/K. J. Vicente
MIE 1409H Design of Ecological Interfaced K, J. Vicente
MIE 1410Y Human Factors Project/Staff
MIE 1411H Design of Work Places/Staff

Information Systems

MIE 1501H Information Systems I: Data and Knowledge Modelling/M. S. Fox
MIE 1502H Information Technology and Systems: Management Strategies/C. D. Sadleir
JCI 1503H Advanced Topics in Computing and Information Systems/ J. C. Paradi
MIE 1504H Management of Technological Change/J. C. Paradi
MIE 1505H Enterprise Modelling/M. S. fox
MIE 1506H Information Systems II: Models of Reasoning//. B. Turksen
MIE 1507H Analysis of Fuzzy Systems/ I. B. Turksen
MIE 1508H Design of Fuzzy Systems/ I. B. Turksen
MIE 1509H Seminar on Approximate Reasoning and Knowledge-Based SystemsII. B. Turksen

Operations Research

MIE 1602H Methods in Linear Programming/ J. S. Rogers
MIE 1603H Integer Programming/ M. W, Carter
MIE 1605H Stochastic Processes/C.-G. Lee
MIE 1606H Queueing Theory/B. Balcioglu
MIE 1607H Stochastic Modelling and Optimization/ V. Makis
MIE 1608H Single Criterion Decision Making/ M. W. Carter
MIE 1609H Multiple Criteria Decision Making/ J. S. Rogers
MIE 1610H The Design of Energy Systems/ J. S. Rogers
MIE 1611H Planning for Capacity Expansion/ J. S. Rogers
MIE 1612H Combinatorics and Graph Theory/ Staff
MIE 1613H Discrete Event Simulation/ D. M. Frances
MIE 1614H Introduction to Operational Research/D. Frances
MIE 1615H Stochastic Dynamic Programming/C.-G. Lee
MIE 1616H Healthcare Management/ M. Carter
MIE 1617H Financial Optimization/. Kwon
MIE 1618H Advanced Operations Research/ R. Kwon
MIE 561H Healthcare Systems/M. W. Carter
MIE 562H Scheduling//. B. Turksen
MIE 566H Decision Analysis/Staff

Design and Manufacturing Engineering

JCI 1321H Wood Engineering/J.K. Spelt, M. Kortschot
JMZ 1704H Polymer Process Engineering/ F. Maine
MIE 1706H Manufacturing of Cellular and Microcellular Polymers/ C. B. Park
MIE 1712H Manufacturing Processes, Machine Tools, Numerical Contro/IR. G. Fenton
MIE 1713H Analysis and Design of Joints in Manufactured Products/ J. K. Spelt
MIE 1714H Optimal Design of Mechanical Systems/staff
MIE 1715H Quality Control/R. D. Venter
MIE 1716H Design and Computer-Aided Engineering/C.B. Park
MIE 1717H Design for Manufacture and Assembly/L.Shu
MIE 1718H Computer Integrated Manufacturing/B. Benhabib
MIE 1719H Engineering Design Modelling/ L. Chen
MIE 1720H Modelling and Analysis of Manufacturing Systems/Staff
MIE 1721H Reliability/V. Makis
MIE 1722H Supply Chain Management and Logistics/C.-G. Lee
MIE 1723H Engineering Maintenance Management/A. K. S. Jardine
MIE 1724H Topics in Estimation and Control of Discrete Product Manufacturing/ Staff
MIE 1725H Group Technology/Staff
MIE 1726H Logistics/Staff
MIE 1727H Quality Assurance I/V. Makis
MIE 1728H Advanced Scheduling and Constraint Programming/Staff
MIE 1729H Machine Perception and Robot Sensors/lStaff
MIE 1730H Plant Layout and Material Handling/staff
MIE 1731H Quality Assurance II/V. Makis
MIE 1732H Tribology/J. K. Spelt
MIE 540H Product Design/C. Gidman

Mathematical Modelling and Analysis

MIE 1801H Engineering Analysis Ill/ A. Mandelis
MIE 1802H Engineering Analysis with Complex Variables/Staff
MIE 1804H The Finite Element Method in Mechanical Engineering/ S. A. Meguid
MIE 1805H Analysis of Engineering Data/ J. G. Kawall
MIE 1806H Introduction to Digital Image Processing and Analysis/Staff
MIE 1807H Principles of Measurements/ J. G. Kawall
MIE 1808H Applied Dynamic System Modelling and Identification/ M. R, Emami
MIE 1809H Advanced Mechatronics/ R. Ben Mrad
MIE 1810H Neural Networks and Fuzzy Systems: Introduction, Modelling and Control/A. A. Goldenberg
MIE 536H Engineering Analysis II/ C. A. Ward

Technology-Society Studies

JEI 1901H Technology, Society, and the Environment I/ W. H. Vanderburg
JEI 1902H Technology, Society, and the Environment II/ W. H. Vanderburg
MIE 1903H Advanced Topics in Preventive Engineering/ W. H. Vanderburg
MIE 1904H Readings in Technology and Modern Society II/ W. H. Vanderburg

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)

Seminar Courses

MIE 3002H Engineering Teaching and Learning (Credit/No Credit)

Medical Biophysics MBP

Graduate Faculty

Full Members

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D. L. Barber, BSc PhD (Coordinator of Graduate Studies)
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W. C. Yeh, MB, PhD
E. Zacksenhaus, BSc PhD

Members Emeriti

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A. Cunningham, BVSc, PhD
J. W. Hunt, Prof. Emer, BSc, MSC, PhD
E. A. Mcculloch, OC, MD, FRCP(C), FRSC, FRS, University Professor Emeritus
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P. Ottensmeyer, BASc, MA, PhD
A. M. Rauth, BSc, PhD, Professor Emeritus
J. E. Till, BA, MA, PhD, FRSC, University Professor Emeritus
G. F. Whitmore, BA, MA, PhD, FRSC

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A. R. Moody
M. D. Noseworthy, PhD, MSc, BSc
G. Pang
M. Puri, PhD, BSc
J. Rast, BS, MS, PhD
A. Schimmer
J. H. Siewerdsen, PhD, MSc, BA
J. G. Sled, BSc , MSc, PhD
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The Department of Medical Biophysics, an interdisciplinary department with three subsections, Cell and Molecular Biology, Molecular and Structural Biology, and Medical Physics, is located primarily at the Ontario Cancer Institute and the Sunnybrook and Women's College Health Sciences Centre. The Department offers opportunities for research 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 electron microscopy, 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.

Degree of Master of Science

Candidates are accepted under the general regulations. Students with diverse backgrounds are encouraged to apply. Applicants holding bachelors degrees from non-canadian universities are required to provide GRE scores with their application. Successful candidates with B.Sc. degrees are enrolled in the M.Sc. program; qualified students can reclassify into the Ph.D. degree program during their second year. The course requirements will depend on the subject chosen for study and on the background of the candidate. The M.Sc. program usually requires two years to complete and includes both course work and research. To qualify for a degree, the student must successfully complete all degree course requirements and pass an oral examination on the topic of the thesis. It should be noted that admission to the Ph.D. program is highly selective and attainment of minimal standing as an M.Sc. student does not guarantee admission to the Ph.D. program.

Degree of Doctor of Philosophy

Candidates for the Ph.D. degree program can be accepted by two routes. They may reclassify from the M.Sc. program or apply under the general regulations after completion of an M.Sc. degree program in biological, physical, chemical, or medical sciences.

Except by special arrangements, candidates are required to be on campus and participating full time until all program requirements are completed. Because of the broad range of topics available for thesis research and because of the different backgrounds of students accepted in the Department, each student will, in consulta-

tion with his or her supervisor, plan a program of study that provides the appropriate background for the area of investigation.

All candidates must complete the required four full-course credits as outlined in the Graduate Student Handbook.

Candidates who transfer/reclassify into the doctoral program or who have completed a M.Sc. degree in Medical Biophysics will receive credit for all courses taken during their M.Sc. program in Medical Biophysics. Candidates who completed their M.Sc. degree in a department other than Medical Biophysics may request one full-course credit for that degree. These candidates must still complete or be formally exempt from the required courses for the Medical Biophysics M.Sc. degree. Exemption from a required course does not reduce the number of courses required; candidates are required to 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.

Collaborative Programs

The Department of Medical Biophysics participates in the following collaborative programs.

Biomolecular Structure

Ph.D. students in the Molecular and Structural Biology stream may choose to enrol in the Biomolecular Structure Collaborative Program. An additional course may be required. For more details, consult the separate entry in this calendar.

Cardiovascular Sciences

Students in this department may choose to enrol in the Cardiovascular Sciences Collaborative Program. Students follow a program of study acceptable to both the participating unit and the collaborative program. An additional course is required for Ph.D. students. Upon successful completion of the requirements, students receive, in addition to the M.Sc. or Ph.D. degree in their home graduate units, a separate certificate from the program and the notation "Completed Collaborative Program in Cardiovascular Sciences" on their transcript. For more details, consult the separate entry in this calendar.

Developmental Biology

Students in this department can participate in the Developmental Biology Collaborative Program. For more details, consult the separate entry in this calendar.

Proteomics and Bioinformatics

Students in this department can participate in the Proteomics and Bioinformatics Collaborative Program. For more details, consult the separate entry in this calendar.

Courses of Instruction

MBP 1001Y Advanced Cell Biology/W-C. Yeh, Staff
Topics change; consult Course Coordinator about current topics

MBP 1007H Fundamentals in Molecular and Cell Biology I/J. Gariepy; Staff

MBP 1008H Fundamentals in Molecular and Cell Biology II/J. Gariepy Staff

MBP 1010H Quantitative Biology—Statistical Methods/G. Stanisz

MBP 1011H Foundations of Bioinformatics/ I. Jurisica
Not currently offered; suggested alternative is JTB 2010H
Proteomics and Functional Genomics

MBP 1015Y° Biophysics Seminar/P Burns, L. Harrington

MBP 1018Y Oncology/K. Vallis

MBP 1022H Advanced Cell Biology for Physical Scientists/D. Dumont

MBP 1023H Clinical Radiation Physics/Staff

MBP 1024Y Advanced Medical Imaging/ S. Graham

MBP 1026H Clinical Imaging for Physical Scientists//P.N. Burns

MBP 1028H Optical, Thermal and Radiation Biophysics/A. Vitkin

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

Medical Science MSC

Graduate Faculty

Full Members

S. M. Abel, BSc, MA, PhD
S. L. Adamson, BSc MSc, PhD
J. Addington
A. Agur, PhD
C. Alain, BA, MA, PhD
J. Allard, MD, FRCP(C)
B. Alman, MD, FRCSC
H. W. Anderson, BSc, MSc, PhD
S. L. Asa, MD, PhD, FRCP(C), FCAP
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A. G. Awad
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E. M. Badley, BSc, MSc, DPhil, PhD
M. Bagby
A. J. Baker, MD, FRCP(C)
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B. Bapat, BSc, MSc, PhD
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C. L. Barr, PhD
M. Barrera, MA, PhD
S. Baruchel
A. S. Bassett, MD
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C. E. Bear, BSc, MSc, PhD
M. Beiser, MD
J. H. Beitchman, MD
J. Belik
R. S. Bell, MSc, MD, FRCS
D. D. Belsham, PhD
M. P. Bendeck, BSc, PhD
B. R. Bhavnani, PhD
S. E. Black, BSc, MD
M. E. Blackstein, MD, PhD, FRCP(C)
R. Blanchard, BA, MA, PhD
A. Bocking
E. R. Bogoch, BA, MSc, MD, PhD
C. Bombardier, MA, MD, FRCP(C)
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D. Branch, PhD
R. A. Bremner, PhD
J. A. Brill, BA, PhD
R. G. Bristow, BSc, MSc, MD, PhD, FRCP(C)
D. Brooks, BSc(PT), MSc, PhD
D. M. Broussard, BA, PhD
J. L. Brunton, BSc, MD, FRCP(C)
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L. Burrows, BSc, PhD
P. L. Carlen, MD, FRCP(C)
R. F. Casper, MD, FRCSC
P.A. Catton
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D. C. Cattran, MD, FRCP(C)
J. R. G. Challis, BSc, PhD, DSc, FIBiol, FRCOG, FRSC
J. W. Chamberlain, BSc MSc, PhD
H. S. Chan, MD
K. R. Chapman, MSc, MD
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A. Cheung, BA, MD, PhD, FRCP(C)
D. Cheyne
D. Clarke, PhD
J. T. Clarke, MD, PhD
M. M. Cohen, BSc, MHSc, MSc, MD, FRCP(C)
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S. Ezzat, MD
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M. G. Fehlings, MD, PhD, FRCS
A. Feinstein, PhD, MPhil, FRCP

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L. E. Ferris, BA, MA, PhD
J. Flanagan, PhD
A. J. Flint, MB, CHB, FRCP(C)
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M. Freedman, BSc, MD
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Introduction

The Institute of Medical Science (IMS) is dedicated to the training of medical researchers and the dissemination of new knowledge relevant to human biology and pathobiology. It was established in 1968 as a graduate unit within the School of Graduate Studies to foster education and scholarship in the clinical departments of the Faculty of Medicine.

The IMS provides a wide range of opportunities for multidisciplinary research in clinical and basic medical science and related fields. Graduate supervisors are world-class researchers located throughout the health sciences network, including hospital research institutes, teaching hospitals, and university basic science departments.

Qualified university graduates with a professional health science degree (e.g., M.D., B.Sc.N.) or an undergraduate arts and science degree of appropriate background who wish to pursue graduate studies in basic or clinical biomedical sciences are encouraged to apply.

Degree candidates will have the opportunity to conduct research in one of three training streams:

1 Biomedical
2 Clinical
3 Health services and population health

Each stream offers a variety of multidisciplinary studies in fields such as cardiovascular sciences, bioethics, neuroscience, membrane biology, respiratory medicine, and psychosomatic medicine.

The IMS participates in the Royal College of Physicians and Surgeons Clinician Investigator Program (CIP).

English Language Proficiency

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 or a minimum score of 250 on the computer-based test together with a minimum score of at least 5 on either the Test of Written English (TWE) or Essay Rating.

Michigan English Language Assessment Battery (MELAB): minimum score of 87.

International English Language Testing System (ELTS): minimum score of 7.5.

Degree of Master of Science

Candidates for this degree are admitted under the general regulations of the School of Graduate Studies and must have graduated with a four-year B.Sc. or an M.D. degree from a recognized university and academic credentials and background preparation appropriate to the field of study. Competitive applicants should have an A- average in their final year of undergraduate study and an A- cumulative average over three of the four total years of study. Candidates 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.

The M.Sc. program usually requires two years and includes both course work and research. To qualify for this degree, one full graduate course credit in addition to MSC 1010Y° M.Sc. Student Seminars is required. Each candidate must submit a thesis on their research and pass an oral thesis examination.

Degree of Master of Health Science in Bioethics

The M.H.Sc. program is offered in collaboration with the University of Toronto Joint Centre for Bioethics and is directed to practitioners who wish to increase their knowledge and skills in bioethics by assisting them in their roles as Clinician/teachers, as members of bioethics committees, etc. It is a professional master's degree program that does not require a thesis.

Please refer to the Bioethics entry in this calendar for more information about this program.

Degree of Master of Science in Biomedical Communications

The M.Sc.BMC program is a two-year professional Master of Science program that involves the artist in medical and health education and research.

Please refer to the Biomedical Communications entry in this calendar for more information about this program.

Degree of Doctor of Philosophy

Candidates for the Ph.D. degree are accepted via one of three routes:

1 After completion of a M.Sc. degree (with a M.Sc. thesis) with at least A- standing from a recognized university. Such students will be expected to complete a minimum of one full graduate course equivalent, plus MSC 1011Y° Ph. D. Student Seminars.

2 Transfer from the IMS M.Sc. program. Outstanding students in the MSc. program may be considered for reclassification into the Ph.D. program without writing a M.Sc. thesis. Such students must have completed one full graduate course equivalent with a minimum A- average, plus MSC 1010Y° M.Sc. Student Seminars. If recommended, the student will be evaluated in an oral transfer examination within 18-24 months of initial graduate registration. The successful candidate will enter the Ph.D. program and will be expected to complete a minimum of two full graduate course equivalents (including those already com-

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

pleted in the M.Sc.), plus MSC 1011Y° Ph. D. Student Seminars. Alternatively, the Exam Committee may decide that the student must complete the M.Sc. degree before being considered for admission to the Ph.D. program.

3 Direct Entry into the Ph. D. Program without having completed a M.Sc. degree. Direct-entry Ph.D. students will be required to pass a qualifying examination within 18-24 months of entry and will be expected to complete a minimum of two full graduate course equivalents, plus MSC 1011Y° Ph. D. Student Seminars.

The Ph.D. graduate program emphasizes research work. 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. it is expected that courses will be completed in the first year, and that the research, written thesis, and defence will be completed by the end of year 3 or 4. To qualify for the Ph.D. degree, a thesis must be submitted and the student must pass an internal examination before proceeding to the final Ph.D. oral examination conducted by the School of Graduate Studies.

Collaborative Programs

The Institute of Medical Science participates in the following collaborative programs:

1 Addiction Studies
2 Aging and the Life Course
3 Bioethics
4 Biomedical Engineering
5 Biomedical Toxicology
6 Cardiovascular Sciences
7 Environment and Health (see Environmental Studies entry)
8 Health Care, Technology and Place
9 Knowledge Media Design
10 Neuroscience
11 Proteomics and Bioinformatics

For more details, consult the separate entries in this calendar.

Courses of Instruction

JCV 3060H Advanced Topics in Cardiovascular Sciences—Molecular Biology and Heart Signal Transduction/ R. Tsushima

JCV 3061H Advanced Topics in Cardiovascular Sciences—Hormones/ C. Wittnich

JCV 3062H Advanced Research in Cardiovascular Sciences—Heart Function/C. Wittnich

JCV 3063H Advanced Research in Cardiovascular Sciences—Vascular/ C. Wittnich

JFK 1120H Selected Topics in Drug Development I/E. M. Sellers

JFK 1121H Selected Topics in Drug Development II/S. X. Y Wu

JHM 1000H Issue Analysis in Interdisciplinary International Health Research/ K Talbot, N. Byrne

JPM 1005Y Behavioural Pharmacology/ D. M. Tomkins

JPM 1008H Psychopharmacology and Women's Health/E. M. Sellers, M. Romach

MSC 1001Y Human Anatomy (Including Embryology) //. Taylor

MSC 1006H Advanced Neuroanatomy/ J. St.-Cyr

MSC 1008Y Advanced Human Embryology and Teratology/M. Wiley

MSC 1010Y° M.Sc. Student Seminars (Credit/No Credit)/Coordinator of Graduate Studies

MSC 1011Y° Ph.D. Student Seminars (Credit/ No Credit)/Coordinator of Graduate Studies

MSC 1020H Molecular Approaches to Health and Disease/D. M. Clarke

MSC 1040H Physiologic Basis of Disease/ T: Lindsay, M. Cattral

MSC 1051H Research Bioethics/T: Lemmens

MSC 1052H Clinical Bioethics/N. Lazar

MSC 1060H Biostatistics for Health Scientists/ P. Corey

MSC 1080H Introduction to Biostatistics and Clinical Epidemiology/D. L. Streiner

MSC 1081H Studies in Schizophrenia/ R. Zipursky

MSC 1082H Seminars in Psychosomatic Research/G. Devins

MSC 1083H Chronobiology and Sleepmakefulness/Staff

MSC 1084H Glomerular Based Diseases– Bench to Bedside/D. Cattran

MSC 1085H Molecular Approaches to Mental Health and Addictions/C. Barr

MSC 1090H Introduction to Clinical Biostatistics/P Corey

MSC 1500H Advanced Radiotherapy and Medical Physics/J. Pignol

MSC 1501H Frontiers in Radiation Medicine Research/J. Siewerdsen

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

MSC 1502H Translational Radiobiology Applied to Radiation Science/R. G. Bristow, R. P Hill
MSC 2010Y Molecular Medicine in Human Genetic Disease/L. Osborne
MSC 4000H Seminars on Environment and Health /F. Silverman
MSC 4100H Cell Mechanics: Structure, Function, and Disorder/C. *Lumsden*
MSC 5100H Evolutionary Medicine: The Sociobiology of Sickness and Healing/ C. Lumsden
MSC 6000H Special Topics in Anatomy/Staff
MSC 7000Y Regenerative Medicine/G. *Levy*
MSC 8000H Transdisciplinary Studies in Infectious Disease (using Hepatitis C as a Model)/J. *Heathcote*

Combined Doctor of Medicine/Doctor of Philosophy Program

Nature of the Program

The M.D./Ph.D. program is offered jointly by the Faculty of Medicine and the School of Graduate Studies. Its purpose is to provide selected and highly qualified students with 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 will carry out research under the supervision of a member of a graduate department or institute at the University and should consult the appropriate department or institute regarding specific research programs.

Admission Requirements

Candidates for admission to the M.D./Ph.D. program 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. Students who are undertaking graduate study at the master's level or are already in first year medical school are also eligible for this program.

Program Requirements

Candidates for admission to the M.D./Ph.D. program may pursue the dual degrees via an integrated or a sequential route.

In the fully integrated approach, students with a four-year bachelor's degree will enter the M.D./Ph.D. program and, within a period not exceeding six years, complete the requirements of the first two years of the M.D. program and all requirements of the Ph.D. program. During this time a predetermined program of integration will be pursued which provides time allocation for both medical school and graduate study. On completion of the Ph.D. degree, students will return full time to the medical program.

In the sequential model, students with a four-year bachelor's degree enter the medical program on a full-time basis. After 18 months of medical school, they then proceed to full-time graduate work until completion of the Ph.D. degree. Students then return to medical school to complete the last 2½ years.

For detailed information and application material, please contact:

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C. E. Percy, BA, MA, DPhil
D. Pietropaolo, BSc MA, PhD
W. R. Robins. BA. MPhil. PhD
M. Rozemond, BA,PHd
E. Rummel, MA, PhD
J. Schallert, BA, MA, MA, PhD
G. Silano, BA, BEd, LLB, MA, PhD
R. E. Sinkewicz, BA, AM, MDiv, DPhil
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C. N. Terpstra, BA, MA, PhD
P. A. Thompson, BA, MA, PhD
D. R. Townsend, BA, MA, PhD
J. T. Wollesen, PhD, Dr phil habil

Members Emeriti

N. Z. Davis, BA, MA, PhD, FAmAcAs, CFBrAc
J. Dutka, BA, MA, PhD, ARCT
J. K. Farge, BA, MA, PhD
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W. A. Goffart, AB, AM, PhD, FMAA, FRHistS, FRSC
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B. Merrilees, MA, D de CU,FRSC, Professor Emeritus
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A. G. Rigg, BA, MA, DPhil
B. C. A. Stock, AB, PhD
R. Taylor, MA, PhD

Associate Members

M. O. Boyle, BA, MA, PhD
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J. M. Holland, BA, PhD
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I. C. McDougall, BA, MA, PhD
M. Pickave, BA, MA, PhD
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W. A. Saleh, BA, MA, PhD
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Organization and Program

The Centre for Medieval Studies provides inter-departmental 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.

Application

Candidates for the M.A. must have an average of at least a B+ standing in their previous course work and must satisfy the Centre's additional admission requirements stated here. Applicants must arrange for two supporting letters to be sent to the Director. They will also be asked to complete forms, available on the Centre's Web site, in which they state the reasons for undertaking graduate studies in the medieval area and their qualifications for applying to do so.

Medieval Latin

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 term and at the end of the spring term. All incoming students must take the Medieval Latin examination at the beginning of the fall term for placement purposes.

Candidates for the M.A. degree, full-time and part-time, must pass the M.A. Latin examination no later than September at the end of the second year after enrolment in the M. A. program.

Course training in Latin is given at four levels. A non-credit course in Classical Latin grammar and readings is given for those with little prior knowledge, MST 1000Y° Introductory medieval Latin is the M.A- Level course and MST 1001Y° Intermediate Medieval Latin is the Ph.D.-level course. These two courses lead specifically to the M.A. and Ph.D. Latin examinations given in the spring.

M.A. students who pass the M.A. Latin examination on arrival will receive advanced standing in Latin equivalent to a credit in MST 1000Y°, and will be required to take only three more courses for the M.A.; however, those interested in eventually proceeding to the Ph.D. are urged to take an additional Latin course in order to satisfy the Ph.D. requirement as early as possible.

Advanced seminars are also available for those wishing to study Medieval Latin literature, Vulgar Latin philology, or the like in more detail.

Degree of Master of Arts

A candidate for the M.A. must have completed a four-year B.A., or its equivalent, in which course work in the medieval period formed part of the program. M.A. students may be full-time or part-time; full-time students may be admitted to either a one-year or a two-year degree depending on their previous training in Latin and medieval studies.

Students may obtain an M.A. in medieval studies by course work or by a combination of course work and thesis. In the course work option, the student must successfully complete four full-course equivalents in medieval subjects; in the thesis option, three full-course equivalents are required in addition to the thesis. In either case, one of the MA. courses must be MST 1000Y° Introductory Medieval Latin (or advanced credit therein). An M.A. thesis must be on a subject approved by the Centre, and the topic must be submitted to the Centre by November 30 of the M.A. year. Candidates who wish to present themselves for the degree at the Fall Convocation must submit two unbound copies of their thesis not later than September 1. For the Spring Convocation, the latest date of submission is March 1.

Degree of Doctor of Philosophy

Candidates must satisfy the Centre of their ability to do independent research of high quality; admission to the Ph.D. program also requires either

a 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,

or

b 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.

In either case, candidates must also pass the M.A. Latin examination before they may be admitted to the Ph.D. program. Students in the Centre's M.A. program must apply formally for admission to the Ph.D. program on the same basis as all other candidates.

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

The Ph.D. is offered only on a full-time basis. During the first two years, students must take a minimum of three full courses or their equivalent, including one full course or two half-courses 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 course requirement for the Ph.D.

In addition to their Ph.D. courses, students must pass the Ph.D. Latin examination, and the Centre's examinations in the French and German languages. When students have qualified in these three languages, they may proceed to the major field examination whose purpose is to demonstrate both the student's scholarly expertise in the particular area of the doctoral dissertation and a broader academic competence. Students should seek out a provisional supervisor with whom to discuss their plans for possible major and minor fields by the beginning of their second year. They will also need to contact two other academic advisors as early as possible, and no later than by the end of their second year. As soon as possible thereafter they should prepare a major field proposal according to the Centre's guidelines. The proposal must be signed by all three of the student's advisors and submitted to the Ph.D. Secretary for approval at least two months prior to the major field examination. After the proposal has been approved, the student's three-member committee will help the candidate to prepare for that examination. The major field examination ordinarily must be passed before the student registers for the fourth year of the program.

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 Ph.D. 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. Five unbound copies of the dissertation must be submitted to the Centre at least ten weeks before the date of the oral examination; at the time of the summer and mid-year breaks, a longer period may be required.

Students can and do complete a Ph.D. in Medieval Studies in four years, but some students, depending upon their financial circumstances and 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 which may continue over a program. The course is graded when completed.

Collaborative Programs

The Centre for Medieval Studies participates in the following collaborative programs:

1 Ancient and Medieval Philosophy
2 Book History and Print Culture
3 Editing Medieval Texts
4 Women's Studies

For more details, consult the separate entries in this calendar.

Courses Available

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.

MST courses marked (PR) have prerequisites; further information may be obtained from the Centre.

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.

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 5007H Criticism of Latin Poetry/ M. J. Dewar
CLA 5017H Latin Legal Texts and the History of Late Roman Institutions/ T. D. Barnes

Comparative Literature

COL 5021H The Body in Medieval Literature/ J. Ross

East Asian Studies

EAS 1143Y Civilization in Medieval China/ R. Guisso

English

ENG 1001H Old English I/D. R. Townsend
ENG 1002H Old English II/A. Healey
ENG 1013H Women in Medieval Literature: Image and Author/S. C. Akbari
ENG 1083H Anglo-Saxon Poetry/ A. P. M. Orchard
ENG 1093H The Medieval Vernacular Book/ A. Gillespie
ENG 2150Y The Meditative Tradition in Western Literature and Art/ B. C. A. Stock
ENG 2523H The Morality Play/D. N. Klausner

French Language and Literature

FRE 1164H Medieval French Language and Literature/Staff

History

HIS 1201H The Materials of Medieval History (Credit/No Credit)/J. Goering
HIS 1207H Pastoralia: The Medieval History of Pastoral Care/J. Goering
HIS 1208H Writings of Robert Grosseteste/ J. Goering
HIS 1209H The Anglo-Saxons/A. C. Murray
HIS 1211H History and Historiography in the Golden Legend (joint graduate/ undergraduate)/,J.Goenhg
HIS 1213H Medieval Monasticism//. Cochelin
HIS 1214H The Merovingians/A. Murray
HIS 1215H Social Change in Medieval England, 1154-1279/M. Gervers
HIS 1218H The Mediaeval Church (joint graduate/undergraduate)/ G. Silano
HIS 1220H Mediaeval Canon Law (joint graduate/undergraduate)/ G. Silano
HIS 1221H Topics in Early Modern European Social History/N. *Terpstra*
HIS 1222H Ritual in Renaissance and Early Modern Europe/N. Terpstra
HIS 1223H Humanism and the Renaissance/ K, Bartlett
HIS 1230H The Sexes in the Western World, 1450-1650/J. Abray
HIS 1283H War, Plague and Hunger in the Early Modern Baltic/ J, Kivimae
HIS 1293Y Kievan Rus'/ P. Magocsi

History of Art

FAH 1120H Problems in Patronage/J. Caskey
FAH 1121H Twelfth-Century Renaissance?/ A. S. Cohen
FAH 1122H Crusaders in the East: Art and Life/J.. Wollesen
FAH 1123H The Art of the Medieval Book/ A. S. Cohen
FAH 1124H Byzantine Church Decoration/ L. Safran
FAH 1125H Problems in Medieval Pilgrimage/ L. Safran
FAH 1126H Exceptional Cities of the Middle Ages/Staff
FAH 1127H Early Medieval Art/A. S. Cohen
FAH 1128H Byzantine Art and the West/ J. T. Wollesen
FAH 1130Y The Classical Tradition in Western Medieval Art/ J. T. Wollesen
FAH 1131H Profane Medieval Art./ J. T. Wollesen
FAH 1133H The Normans in Southern Italy and Sicily/J. Caskey
FAH 1134H Communal Painting and Propaganda in Italy During the Thirteenth and Fourteenth Centuries/J.T. Wollesen
FAH 1135H Naples in the Later Middle Ages/ J. Caskey
FAH 1171H Beginning of Modernism: From Images to Pictures/ J. T. Wollesen
FAH 1228H Representation, Information and Interpretation of Medieval Pictures/J. T: Wollesen

History and Philosophy of Science and Technology

HPS 1018Y Topics in the History of Technology/B. S. Hall
HPS 1215H Medieval Technology and Society/ B. S. Hall
HPS 1216H Medieval Technology: Selected Topics/B. S. Hall
HPS 1217H Technology and War: 1090-1918/ B. S. Hall
HPS 5007H Fundamentals of the History of Technology I/B. S. Hall

Italian Studies

ITA 1025H Old Italian/G.P Clivio
ITA 1200H Dante/D. Pietropaolo
ITA 1203H Boccaccio/Staff
ITA 1330H Petrarch and Petrarchism/Staff
ITA 1540H Renaissance Italian Theatre/ K. Eisenbichler

ITA 1545H The Sacra Rappresentazione/ K. Eisenbichler
ITA 1597H The Commedia dell'Arte/ D. Pietropaolo

Joint Courses
JMT 1001H Topics in the Ancient Philosophical Commentators(PR)/J. Magee
JRL 1100Y Introduction to Romance Philology/G. P Clivio

Medieval Studies
MST 1000Y° Introductory Medieval Latin (Credit/No Credit)/Staff
MST 1001Y° Intermediate Medieval Latin (CrediVNo Credit)/Staff
MST 1002Y Advanced Medieval Latin (Credit/ No Credit)/Staff
MST 1012H Carolingian Poetry (PR)/ A. Orchard
MST 1013H Pre-Conquest Anglo-Latin Literature (PR)/A. Orchard
MST 1015Y Latin Hagiographic Literature ca. 300-800 (PR)/J. Corbeff
MST 1018H Anglo-Latin Literature: Eleventh and Twelfth Centuries (PR)/ D. Townsend
MST 1020H The Medieval Latin Epic (PR)/ D. Townsend
MST 1035H Humanistic Latin (PR)/ L. Armstrong
MST 1101H CodicoIogy/V Brown
MST 1104H Latin Palaeography I (PR)/ V. Brown
MST 1105H Latin Palaeography II (PR)/ V: Brown
MST 1107H Latin Textual Criticism (PR)/ J. Magee
MST 1110H Diplomatics and Diplomatic Editing (PR)/M. Meyerson
MST 1111H Sources and Materials for Editing Medieval Texts (PR)/W. Robins
MST 1113H Vernacular Text-Editing: A Collaborative Project/W. Robins
MST 1120H Literacy in Early Medieval Europe/N. Everett
MST 1210H Judeo-Christian Koine Greek (PR)IR. E. Sinkewicz
MST 1212H The Apocryphal Bible (PR)/R. E. Sinkewicz
MST 1371H Old English Philology: Grammar (PR)/A. Healey
MST 1377H Aelfric's Mind at Work (PR)/P. Thompson
MST 1379H The Blickling Homilies (PR)/ A. Healey
MST 1380H Aelfric's Catholic Homilies (PR)/ P. Thompson
MST 1381H Homilies of the Vercelli Book (PR)/A. Healey
MST 1382H Old English Hagiography, Mostly Aelfrician /P. Thompson
MST 1383H Old English Biblical Verse (PR)/ A. Orchard
MST 1385H Theory and Practice in the Editing of Old English Texts I (PR)/Staff
MST 1392H Editing and Appreciating Wulfstan's Prose (PR)/ A. Orchard
MST 1398H Alfredian Prose (PR)/A. Orchard
MST 1422H "Warts and All": Old English Medical and Scientific Texts (PR)/P. Thompson
MST 1425H Medieval Magic: Predicting the Future and Influencing Events/ A. Orchard
MST 2010Y Old Norsell. McDougall
MST 2015H Studies in Old Norse Texts (PR)/ A. Orchard
MST 2017H The Sources of Norse Myths (PR)/A. Orchard
MST 2018H Old Norse Legendary Sagas (PR)/A. Orchard
MST 2019H Icelandic Family Sagas (PR)/ A. Orchard
MST 2021H Insular Literacy 400-1200/ A. Orchard
MST 2022H Anglo-Saxon Schools (PR)/ A. Orchard
MST 2030Y Old and Middle Irish/A. Dooley
MST 2031H Early Irish Saga (PR)/A. Dooley
MST 2033H An Introduction to Early Irish Poetry (PR)/A. Dooley
MST 2035H Celtic-Latin Literature (PR)/ A. Orchard
MST 2037H Early Celtic Christianity/M. Herren
MST 2040Y Medieval Rhetoric and Poetics (PR)/J, Ross
MST 2041H Medieval Allegory/W. Robins
MST 2045H Medieval Cosmology/ W. R. Bowen
MST 2048H Music in Medieval Life/J. Haines
MST 2050Y Middle Welsh/D. N. Klausner
MST 2055Y Studies in Middle Welsh Texts (PR)/D. N. Klausner
MST 3010Y Augustine of Hippo: Life and Writings/B. Stock
MST 3015H The Latin Bible from Jerome to Charlemagne (PR)/M. Herren
MST 3019H The Classical Tradition in the Middle Ages II: Mythography (PR)/M. Herren

°Courses which may continue over a program. The course is graded when completed.
(PR) Courses with prerequisites

MST 3021H Boethius (PR)/J. Magee
MST 3035H Alexander Neckam: Life and Works (PR)/C. J. McDonough
MST 3101H Current Theory and Medieval Texts: An Introduction/ D. Townsend
MST 3102H Topics in Current Theory and Medieval Texts (PR)/ D. Townsend
MST 3103H The Theory of the Middle Ages/ W. Robins
MST 3105H Teaching and Transmitting Poetry in the Early Medieval Period/ A. Orchard
MST 3107H Classical Monsters in Early Medieval Context/A. Orchard
MST 3123H The Bible in Middle English (PR)/ G. Trudel
MST 3124H Wycliffe and His Opponents (PR)/ G. Trudel
MST 3131H Troubadours and Trouvered J. Haines
MST 3140Y Medieval Catalan Language and Literature/ J. Ross
MST 3161H European Literature and the Third Estate/ W. Robins
MST 3201H Medieval Social History, 1000-1500/I. Cochelin
MST 3203H Topics in Medieval Economic History/L. Armstrong
MST 3205Y Violence in Medieval Society (joint graduate/undergraduate)/ M. Meyerson
MST 3210H Medieval Spain (PR)/ M. Meyerson
MST 3225Y Jews and Christians in Medieval and Renaissance Europe (joint graduate/undergraduate)/ M. Meyerson
MST 3230H Law in Medieval Europe/ L. Armstrong
MST 3235H Medieval Florence (PR)/ L. Armstrong
MST 3242H The Carolingians and the Birth of Europe/N. Everett
MST 3243H Dark Age Italy/N Everett
MST 3259H Medieval Monastic Culture: Lands of St. Benedict/V Brown
MST 3261H Cluny in the Central Middle Ages/ I. Cochelin
MST 3262H Monastic Identities/I. Cochelin
MST 3301H Themes in Medieval Philosophy/ D. Black
MST 3305H Property and Poverty in the High Middle Ages (PR)/P. King
MST 3306H Augustine on Will and Grace (PR)/P. King
MST 3309H Fear and Loathing in the Middle Ages: Medieval Theories of the Emotions (PR)/P. King
MST 3320H Thomistic Epistemology/D. Black
MST 3325H Introduction to Medieval Ethical Theory (Twelfth to Fourteenth Century)/M. Pickave
MST 3340H Imagination in Medieval Philosophy/D. Black
MST 3345H Prophets and Philosophers: Theories of Prophecy in the Medieval Islamic, Jewish and Christian Traditions/D. Black
MST 3346H Medieval Islamic Philosophy/ D. Black
MST 3401H Introduction to Medieval Christianity/ R. Sinke wicz
MST 3405H Early Christian Monasticism/ R. Sinkewicz
MST 3415H John Cassian and Early Monasticism in GauV R. E. Sinkewicz
MST 3425H Eastern Christianity 325-1453 CVR. E. Sinkewicz
MST 3501H Introduction to the Medieval Christian Liturgy/ J. Haines
MST 9310Y,HDirected Reading/Staff
MST 9315Y,HDirected Reading/Staff

Music

MUS 1040H Topics in Medieval Music/ J, Haines

Near and Middle Eastern Civilizations

NMC 1311Y Post-Biblical Hebrew: Mishnah and Midrashim/H. Fox
NMC 1324Y Hebrew Legal Codes, Medieval and Modern/H. Fox
NMC 1326Y Topics in Midrashic Literature/ Staff
NMC 1500Y Archaeology, from Alexander to Muhammad/E. J. Keall
NMC 2090Y Islamic History to the Fall of Baghdad/L. S. Northrup
NMC 2119Y Readings in Mediaeval Arabic Palaeography and Diplomatics/ L. S. Northrup
NMC 2131Y Ethics and Education in Medieval Arabic Texts/S. Gunther
NMC 2132H Hadith: Classical Religious Literature in Islam/S. Gunther
NMC 2133H Medieval Arabic Sources on Islamic Thought/S. Gunther
NMC 2135H Story-tellers, Travellers and Warriors in Medieval Arabic Literature/S. Gunther

(PR) Courses with prerequisites

NMC 2221Y Medieval Persian Ethical and Advice Literature/M. E. Subtelny
NMC 2222Y Persian Mystical Poetry/ M. E. Subtelny
NMC 2225Y History of Medieval Iran and Central Asia/M. E, Subtelny
NMC 2226Y Readings in Medieval Persian Historical and Documentary Sources/M. E. Subtelny
NMC 2310Y Ottoman History to 1800/ J. R. Blackburn
NMC 2315Y Seminar in Topics from Ottoman History/J. R. Blackburn
NMC 2500H Early Islamic Art and Architecturell. V: Golombek
NMC 2515Y The Islamic City/E. J. Keall
NMC 2520H Western Medieval Islamic Architecture/L. V. Golombek
NMC 2521H The Taj Mahal and Its Origins: Medieval Islamic Architecture in Iran, Central Asia, and India/ L. V. Golombek
NMC 2526H Islamic Painting/L. V. Golombek
NMC 2527H Islamic Decorative Arts/ L. V. Golombek
NMC 2540Y Islamic Archaeology/E. J. Kea//

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/ J. H. Corbett
RLG 3224Y Early Eastern Christianity/ J. H. Corbett
RLG 3225Y Early Churches in Cross-Cultural Perspective/J. H. Corbett
RLG 3653Y Jewish Exegetical Traditions in AntiquitylH. Fox
RLG 3941Y Celtic Mythology/A. Dooley

Slavic Languages and Literatures
SLA 1104Y Old Church Slavonic/J. *Schallert*

Spanish
SPA 2021H The Politics of Print/J. *Blackmore*

Molecular and Medical Genetics MMG

Graduate Faculty

Full Members

B. J. Andrews, BSc PhD
I. Andrulis, BA, PhD
J. E. Aubin, BSc, PhD
A. Bernstein, BSc, PhD, FRSC
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A. R. Wilde, BSc, PhD, Canada Research Chair
S. Wodak, PhD
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M. Zhen, BSc, PhD, Canada Research Chair

Members Emeriti

A. J. Becker, MD, PhD
J. P. Carver, BA PhD
v. L. Chan, BSc, MSc, PhD
M. Gold, BA, PhD
J. J. Krepinsky, BSc, PhD
H. Murialdo, MSc, PhD
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The Department of Molecular and Medical 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 Department offers research training in a broad range of genetic systems from bacteria and viruses to humans. Research projects include DNA repair, recombination and segregation, transcription, RNA splicing and catalysis, regulation of gene expression, signal transduction, interactions of host cells with bacteria and viruses, developmental genetics of simple organisms (worms and fruit flies) as well as complex organisms (mice), molecular neurobiology, molecular immunology, cancer biology and virology, structural biology, and human genetics and gene therapy.

For detailed information concerning these areas, visit the Department's Web site.

Degree Programs in Molecular and Medical Genetics

The Department offers both the Master of Science and the Doctor of Philosophy degrees and prefers to accept students with excellent academic credentials in molecular biology, genetics, microbiology, and/or biochemistry who wish to proceed to the Ph.D. and beyond. It should be noted that admission to the Ph.D. program is highly selective and attainment of minimal standing as an M.Sc. student does not guarantee admission to the Ph.D. program.

Degree of Master of Science

Admission Requirements

Candidates with a B.Sc. or M.D. degree or equivalent are usually accepted into the MSc. program. See "Degree of Doctor of Philosophy" below for transfer or admission to the Ph.D. program.

Residence Requirements

Candidates entering the M.Sc. program are required to spend 12 months in full-time attendance.

Program Requirements

Candidates in the master's program must complete MMG 1012H° (or equivalent) and MMG 1015Y° (seminar course), and a thesis on a research project. To qualify for the degree, the student must defend the thesis at an oral examination.

Degree of Doctor of Philosophy

Admission Requirements

There are three possible routes to the Ph.D. degree:

1 Students may reclassify to the Ph.D. program during the first or second year in the M.Sc. program.

2 Students may be accepted into the Ph.D. program with a completed M.Sc. degree or equivalent from the University of Toronto or another recognized university.

3 Under exceptional circumstances, outstanding students with a B.Sc. degree, an M.D. degree, or equivalent, may be accepted directly into the Ph.D. program.

Residence Requirements

Candidates 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. Candidates entering the doctoral program from a bachelor's program are required to spend a minimum of three sessions in full-time attendance.

Program Requirements

Candidates in the doctoral program must complete courses equivalent to those required for the M.Sc. degree plus MMG 1016H° (or equivalent), MMG 1017H0, and a thesis on a research project.

Courses of Instruction

JBB 1425H Biophysical Methods/Staff
JBB 2025H Protein Crystallography/J.M. Rini, Staff
JDB 1025Y Developmental Biology/ A. Spence
MMG 1012H° Topics in Molecular and Medical Genetics I (formerly MMG 1012Y0)/A. Davidson, Staff
MMG 1015Y° Seminar/B. Derry, F. Sicheri
MMG 1016H° Topics in Molecular and Medical Genetics II (formerly MMG 1014Y°)/A. Davidson, Staff
MMG 1017H° Topics in Molecular and Medical Genetics III/B. Deux F. Sicheri, Staff
MMG 1420H* Regulation of Gene Expression/ J. M. Segall
MMG 1425H Signal Transduction and Cell Cycle Regulation/Staff
MMG 1451H* Genetic Analysis of Development: Yeast and Worms/ H. Krause

Note: Effective September 1, 2001, MMG 1012Y and MMG 1014Y will be replaced by MMG 1012H and MMG 1016H. Students enrolled previously in MMG 1012Y and MMG 1014Y will continue to take them.

Degree of Master of Science in Genetic Counselling

The Master of Science degree in genetic counselling is a full-time professional program that prepares students with the academic and clinical skills to provide genetic counselling. Genetic counselling is the provision of information to individuals and families regarding the occurrence, or risk of occurrence, of a genetic disorder or birth defect. 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. The ability to define and address the psychosocial issues associated with a genetic disorder in a family is central to the practice of genetic counselling. This field also incorporates teaching, administrative, and research skills, which are integrated in the curriculum.

This program has been accredited by the American Board of Genetic Counseling under the Recognized New Program Status as a graduate level training program.

Admission Requirements

Candidates for admission must have completed a 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. Additional requirements include 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 will be sought in both the application and interview processes. Conditional acceptance may be granted to outstanding candidates lacking the above prerequisite courses: in such instances, the courses deemed necessary must be completed with a B+ standing prior to admission.

Residence Requirements

Candidates entering the M.Sc. program in genetic counselling will be required to spend 18 months over a 2-year period in full-time attendance. Students will be encouraged to organize an intervening summer rotation in a geographic location of their choice.

Program Requirements

Candidates must complete all required course work, 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.

Required Courses of Instruction

MSC 2010Y Advanced Concepts in Human Genetic Disease/D. Hogg
MMG 1120Y Clinical Rotations *I/D.* Chitayat, C. Shuman
MMG 1122Y Issues in Genetic Counselling I/ M. Thomas
MMG 1124Y Principles of Effective Counselling/R. Babul-Higi
MMG 1126Y Clinical Issues in Pregnancy and Child Development/ C. Cytrynbaum

*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.

MMG 1128Y Risk Calculation and Research Methodology/R.Watt, J. Sutherland
MMG 1130Y Tutorial in Molecular Genetics/ L. *Dupuis*
MMG 1132H Laboratory Skills/G. Rosenberg
MMG 1220Y Clinical Rotations II/D. Chitayat, C. Shuman
MMG 1222Y Issues in Genetic Counselling II/ C. Shuman
MMG 1224Y Advanced Principles of Effective Counselling/C. Cytrynbaum
MMG 1226Y Concepts in Clinical Genetics/ D. Chitayat, J. Clarke, C. Shuman
MMG 1228Y Independent Research Project/ D. Chitayat, C. Shuman
MMG 1230H Cancer Genetic Counselling/ H. Druker

Collaborative Programs

The Department participates in the following collaborative programs:

1 Biomolecular Structure
2 Developmental Biology
3 Neuroscience
4 Proteomics and Bioinformatics

For more details, consult the separate entries in this calendar.

Museum Studies MSL

Graduate Faculty

Full Members

J. A. Fleming, BA, MA, PhD
(Interim Director)
B. S. Hall, BA, PhD
T. H. Levere, BA, MA, DPhil, DLitt, FRSC
E. Pedretti, BSc, BEd, MEd, PhD
D. T. Ruddel, BA, MA, PhD
A. Stanbridge, BA, MA, PhD
J. L. Teather, BA, MA, PhD

Members Emeriti

U. M. Franklin, PhD, LLD, DSc, DDN, CC, FRSC,
University Professor Emeritus
T. C. Young (Jr), BA, PhD

Associate Members

P. M. Bell, BA, MA
C. Benn, BA, MDiv, PhD
S. Falconer, BA, MMSt
I. Gregory, RGD
S. Maltby, BA, MAC
H. M. Mclaughlin, BA, MSc, PhD
H. Mestel, BA, MFA, MBA
K. J. Rumbold, BAA
B. J. Soren, BPHE, BEd, MSC(T), PhD
(Coordinator of Graduate Studies)

Address:
Museum Studies Program
Room 6003, Robarts Library
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E-mail: museum.studies@utorontoxa
Web: www.utoronto.ca/museum

The Museum Studies Program provides students with a combination of academic and practical education in preparation for future involvement in a museum or related cultural agency. The Program examines the theoretical body of knowledge of museology as a necessary context for professional practice and includes an internship at an appropriate museum or related cultural organization. The academic area of concentration is museum studies; however, students may also take courses in museum-related disciplines such as anthropology, history, history of art, information studies, history and philosophy of science and technology, education, or management through their selection of elective courses.

Faculty in the program are from a range of disciplines within the University; some are professional members of the museum community.

Degree of Master of Museum Studies

Admission Requirements

The Museum Studies Program offers the professional degree of Master of Museum Studies (M.M.St.). Admission to the M.M.St. program requires a four-year B.A. or B.Sc. 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.

The Museum Studies Program does not provide hard copies of the application package. The forms required for application can be downloaded from the School of Graduate Studies Web site www.sgs.utoronto.ca. The Museum Studies Web site www.utoronto.ca/museum provides the program codes required to complete Form D of the application. The Museum Studies Web site and the School of Graduate Studies Web site both contain important information and instructions for completing applications.

Applicants must submit the following supporting documents with their applications:

1 One official transcript of the applicant's academic record from each university attended, complete to the time of application.
2 A letter of intent (maximum 500 words), indicating areas of interest and experience in museum studies, heritage agencies, or comparable institutions.
3 A resume.
4 Three letters of reference, written on institutional or work-related letterhead. (Museum Studies does not provide a standard template for letters of reference). Appropriate referees include university professors (preferred), museum professionals, or others relevant to the field of museology.
5 Other relevant information considered by the applicant to strengthen his or her application.

The closing date for applications to the M.M.St. program, by which time applicants must have submitted all their supporting documentation as well as their completed application, is January 30.

Applicants accepted by the Museum Studies Program are admitted as candidates for this degree under the General Regulations of the School of Graduate Studies.

English Language Facility

Applicants whose primary language is not English and who graduated from a university where the language of instruction was not English must also submit a TOEFL score of at least 580 and a TWE score of at least 5, or equivalent results in a recognized test of English language facility.

Program Requirements

The minimum requirement for the M.M.St. degree is seven full-course equivalents (FCE) also known as credits. In order to maintain good academic standing and to continue in the M.M.St. program, a candidate must:

maintain a B+ average overall,

complete at least three full-course equivalents, including MSL 1000H, MSL 1100H or MSL 1300H, MSL 1150H, MSL 1350H, and MSL 1200H, 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 program of study for a full-time student begins in September and normally extends over 24 consecutive months.

Language Requirement

Before the end of their program, candidates will be required to demonstrate a reading knowledge of a second language (normally French) by means of a written exam and achieve a minimum grade of 70%. In the case of a student whose second language is English, the English language can be accepted for the second language requirement.

Courses of Instruction

Not all courses are offered every year. Please consult the Museum Studies Web site for course availability. The minimum requirement for the M.M.St. degree is seven full-course equivalents (credits).

Required Courses *(5.5 credits)*

MSL 1000H Museums and Public History

MSL 1100H Museology and Theory
or
MSL 1300H Contemporary Theories of Art and Culture
(MSL 1100H and MSL 1300H are offered in alternate years.)

MSL 1150H Collection Management
MSL 1200H Fundamentals in Museum Planning and Management
MSL 1350H Museums and their Publics
MSL 3000Y Internship
MSL 4000Y Exhibition Project
MSL 5000Y+ Research Methods Seminar

Elective Courses *(1.5 credits total for internal and external electives)*

Internal (Museum Studies) Elective Courses (at least 0.5 credit)

MSL 2000H Curatorial Practice
With the approval of the Graduate Coordinator, students with prior museum experience may substitute MSL 2000H Curatorial Practice for MSL 1000H Museums and Public History.
MSL 2000H Museum Environment
MSL 2150H Collecting in History: Early Modern Representations
MSL 2200H The History of Museums in Canada
MSL 2250H Topics on Museums and Society in Canada
MSL 2300H Museums and New Media Practice
MSL 2350H Museum Planning and Management: Projects, Fundraising and Human Resources
MSL 5050H Special Studies

External Elective Courses (at least 7.0 credit)

Courses relevant to the Museum Studies Program and student interests are available within the listings of other graduate units as found in this calendar.

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

Music MUS

Graduate Faculty

Full Members

G. Averill, BA, PhD
(Chair, Graduate Studies)
L. R. Bartel, BA, BMus, MEd, PhD
W. R. Bowen, BA, BMus, MA, PhD
K. N. Chan, BASc, BMus, MMus, MusD
C. Clark, BMus, MA, PhD
L. A. Dolloff, MusB, PhD
D. Edwards, MMus, DMA
R. Elliott, PhD, Chalmers Chair in Canadian Music
J. R. Hartenberger, BMus, MMus, PhD
(Coordinator of Graduate Studies)
C. Hatzis, MM, PhD
J. Hawkins, BM, MM
G. S. Johnston, BMus, MA, PhD
G. G. Jones, BA MA, PhD
J. R. Kippen, BA, PhD
G. Kulesha, ARCT, AMusTCL
L. E. Macdonald, BME, MM, Lois Marshall Chair in Voice
J. S. Mayo, MA, PHD
J. E. K. Parker, MM, DMA
M. A. Parker, BA, MM, PhD, ARCT
D. Patrick, MMus
S. J. Ralls, MA, LRAM
D. Rao, BS, MM, PhD, Elmer lseler Chair in Conducting
A. Rapoport, MusDoc
P. E. Read, BEd, MusBac, MusM
J. L. Reynolds, BA, BMus, MMus, MA, PhD
S. Rolston, SA, MM
P. M. M. Shand, BA, MMus, EdD, ARCT
S. J. St.John, BMus
C. K. Walter, BMus, MMus, EdD

Members Emeriti

D. W. Beach, BA, MusM, PhD
J. Beckwith, CM, MMus, MusDoc
G. S. Ciamaga, MFA
R. A. Falck, BMus, MFA, PhD
A. Hughes, MA, DPhil, University Professor Emeritus
E. C. Laufer, MusBac, MFA, MusM
T. J. McGee, BME, MA, PhD
C. R. Morey, BMus, MM, PhD, ARCT

Associate Members

M. P. Albano
R. Armenian, BS
M. C. Cain, MA, PhD
S. Horst, MM
M. Koga, BMus, MMus, DMA
K. Komissaruk, BMus, MMus, DMus
J. F. Kruspe, MusBac
C. A. Loewen, MM
R. McClelland. BMus. MMus. DMA
M. Morrison, ArtDip
M. Orlov, MAPerf
T. Promane, HonsDipMus
M. J. Sallmen, MA, PhD
A. Stanbridge, MA, PhD
C. Stowe, BMus, MMus, DMA
L. Wong, MusBac

Performance Instructors

Consult the faculty list in the Faculty of Music Calendar.

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Graduate Department of Music
Edward Johnson Building
80 Queen's Park Crescent
University of Toronto
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M5S 2C5

Telephone: (416) 978-5772
Fax: (416) 946-3353
E-mail: grad.music@utoronto.ca
Web: www.utoronto.ca/music/

DEGREE OF MASTER OF ARTS

Admission Requirements

The M.A. is offered only in musicology/theory. Candidates are accepted under the general regulations. A candidate from this University with an average standing of mid-B or better over the final two years of the Bachelor of Arts specialist program in music or the Bachelor of Music program, or with equivalent standing from another university, will be eligible to apply. 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

M.A. candidates are admitted to a 2-session program and are required to take a minimum of 12 half-courses or equivalent. The Graduate Coordinator will advise students on course selection to establish a balance between the student's interests and any perceived weaknesses in background preparation. All students will take MUS 1000H/1001H lntroduction to *Music Research I/II* in the first year. Elective courses may be taken in historical musicology, ethnomusicology, and/or music theory. With the consent of the Department, up to one full-course equivalent may be taken in a graduate department other than music.

One language other than English is required. This will ordinarily be German except by petition to the Department. Students should fulfil the language requirement during the first year of the program. Any student wishing to petition for a language other than German must do so during the first year.

DEGREE OF MASTER OF MUSIC

Admission Requirements

1 The degree of Master of Music (Mus.M.) is offered in composition, in music education, and in performance.

2 Applicants must hold the Bachelor of Music degree in the area of specialization from the University of Toronto with an average standing of mid-B or better over the final two years, or an equivalent program and standing from another university. Applicants whose undergraduate degree does not meet this standard may be required to take appropriate prerequisite courses.

3 Applicants in:

a composition must submit several original compositions, at least one of which shall be with moderately large instrumentation.

b music education will normally be required to have had 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.

c performance must pass an audition. Applications will be accepted in the following areas: conducting, instrumental, vocal, piano performance with concentration in vocal and instrumental chamber music, performance with concentration in historical performance, opera, and jazz.

Program Requirements

All requirements for the degree must be completed within five years of first enrolment.

1 *Composition*

A minimum of six full courses taken over two years is required for the degree, including MUS 3100Y and its continuation MUS 3105Y. Candidates may be required to take additional courses based on the results of diagnostic tests in musical analysis, counterpoint, and harmony given upon entrance. Under the guidance of an advisor, each student will prepare an original composition in large form or an electroacoustic composition of comparable dimensions which will be defended at a final oral examination.

2 *Music Education*

Candidates may proceed to the degree through a program of either full-time or part-time study. Eight half-course equivalents are required for the degree. Candidates must select a minimum of five half-course equivalents in music education, including MUS 2111H Research Methods in Music Education and MUS 2151H Philosophical Foundations of Music Education. Elective courses may be chosen from the M.A./Ph.D./Mus.M./Mus.Doc. courses of instruction and/or other graduate courses available in the University, subject to the approval of the Department. A major essay (MUS 2990Y) may be substituted for one full course with the approval of the Department. All candidates must pass a comprehensive examination in music education (written and oral). A description of the degree requirements and courses is available on request.

3 *Performance*

a *Instrumenta/Vocall*

Two recitals and seven full-course equivalents are required. The courses must include:

- MUS 4444Y and MUS 4445Y (applied lessons)
- one full-course in music literature (MUS 4200Y) normally taken in the first year of the program
- two half-courses selected from MUS 4600H or MUS 4606H; MUS 4610H; MUS 4615H
- one full-course equivalent chosen from a specified list approved by the Department

Recitals may include a chamber music component with the approval of the Department.

b *Opera*

Seven full-course equivalents are required. The courses must include:

- MUS 4444Y and MUS 4445Y (applied lessons)
- one full-course in music literature (MUS 4200Y taken in the first year)
- Advanced Performance Studies (MUS 4620Y, taken in the second year)
- one full-course equivalent chosen from a specified list approved by the Department
- two full courses in Operatic Studies (MUS 4900Y and MUS 4901Y)

Performance in operatic productions will be evaluated by a committee and assigned grades under Operatic Role I (MUS 4966Y) and Operatic Role II (MUS 4988Y).

c Conducting

In addition to two public performances, six full-course equivalents are required. These must include:

- one full course in music literature (MUS 4200Y, normally taken in the first year)
- two half-courses 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).

d *Jazz*

Two recitals and seven full-course equivalents are required. Students must include the following courses in their programs:
- MUS 4444Y; MUS 4445Y; MUS 4300Y, normally taken in the first year of study
- MUS 4606H; MUS 4615H;
- either MUS 4310Y, MUS 4311Y, or one full-course equivalent chosen from a specified list approved by the Department

Students must also include in their programs one full-course equivalent selected from one or more of the following areas:
Small Group Jazz Ensemble Performance (MUS 4740H, MUS 4741H, MUS 4742H, MUS 4743H)
Jazz Orchestra (MUS 4750H, MUS 4751H, MUS 4752H, MUS4753H), or
Vocal Jazz Ensemble (MUS 4760H, MUS 4761H, MUS 4762H, MUS 4763H)
Normally, students will be required to perform two recitals, but they may elect to replace one of them with a significant recording project. Requirements pertaining to this project will be provided upon request.

e *Collaborative Piano*

Two recitals and seven full-course equivalents are required. The courses must include:
- MUS 4444Y and MUS 4445Y (applied lessons)
- one full-course in music literature (MUS 4200Y) normally taken in the first year of the program
- two half-courses 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).

f *Vocal Pedagogy*

Two recitals and seven full-course equivalents are required. The courses must include:
- MUS 4444Y and MUS 4445Y (applied lessons)
- one full course in music literature (MUS 4200Y) normally taken during the first year of the program
- two half-courses selected from MUS 4600H, MUS 4610H and MUS 4615H; or MUS 4620Y
- MUS 2122H, MUS 4240H, MUS 4241H, MUS 4248H
- one half-course selected from MUS 4231H, MUS 4213H and MUS 4730H
- one half-course or equivalent chosen from a list of courses approved by the Department.

DEGREE OF DOCTOR OF PHILOSOPHY IN MUSICOLOGY

Admission Requirements

This is a research degree. Candidates must hold a master's degree with specialization in musicology and must have an average standing of B+ or better. Applicants must submit, as a part of their application, an 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.

Program Requirements

1 The Ph.D. degree program is designed to be completed in four years, but in some circumstances five years may be necessary. The maximum program length is six years.
2 A minimum of 1.5 full-course equivalents beyond the M.A. is required, including:
a the Ph.D. Seminar
b Research in Musicology
c a choice from the departmental list.
With permission, a candidate may substitute a graduate course from outside the Department for c. Additional courses above the minimum requirement may be recommended, as need dictates.
3 The Ph.D. degree program is offered in four general areas:
a historical musicology
b ethnomusicology
c theory
d interdisciplinary
As early as possible in the first year, the candidate will identify an area of study, begin discus-

sions with a principal advisor, and assemble an advisory committee of at least three members (including the advisor as chair) in consultation with the Department. By December of the second year, the thesis proposal must be submitted for approval by the musicology/theory members of the Department. The committee will meet with the candidate at least two times each academic year. The committee is charged with examining the major field and with ascertaining the preparedness of the candidate to carry out research on the thesis topic, including background knowledge, language, or any matters that the committee deems important. The committee may require further study, course work, or special preparation by the candidate. All aspects of background, preparation, and development of the thesis will be monitored by the committee. In the event of unsatisfactory work by the candidate, the committee may recommend termination of candidacy.

4 The candidate will prepare a thesis under the direction of an advisor and a committee; the candidate will defend the thesis at a final examination. The thesis, including bibliography and appendices but excluding musical examples, should not exceed 75,000 words. The Department will not consider a thesis that exceeds 100,000 words.

DEGREE OF DOCTOR OF PHILOSOPHY IN MUSIC EDUCATION

Admission Requirements

Candidates 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. Candidates must provide their results on the Miller Analogies Test. At the discretion of the faculty, candidates may be required to provide a videotape of their teaching expertise. Appropriate letters of reference commenting on the candidate's teaching experience, music performance ability, and academic ability are also required.

Program Requirements

1 A total of six full-course equivalents is required. At the discretion of the Department, the candidate may receive credit for up to three full-course equivalents from an acceptable master's degree program. At least two full-course equivalents (including MUS 2995Y Music Education Doctoral Research Project) must be taken from the departmental offerings in music education. The balance of the candidate's required program must be approved by the Department and may include courses from the M.A./Mus.M./Ph.D./Mus.Doc. list and/or from another department in the School of Graduate Studies.

2 Candidates must be registered full time, on campus for a minimum of two terms, in order to be in such geographical proximity as to be able to participate fully in the Department's activities associated with the program.

3 As early as possible in the second year, the candidate will submit a thesis proposal which must be approved by the end of that year. On approval of the proposal by the music education division of the Department, a principal advisor and an advisory committee of at least three members (including the advisor as chair) will be appointed. The committee will meet with the candidate at least two times each academic year.

4 Language requirements, if any, will be established by the student's advisory committee, based on specific research needs.

5 Upon successful completion of the comprehensive examination, the candidate proceeds to complete:

a an oral defence of the thesis proposal,

b a thesis under the direction of an advisor, and

c an oral defence of the thesis at a final examination.

DEGREE OF DOCTOR OF MUSIC

Admission Requirements

The Doctor of Music (Mus.Doc.) is a doctoral program in composition. An applicant must hold the degree of Master of Music in composition of this University or its equivalent from another university with an average standing of B+ or better. Two or more extended compositions in various media and a tape of at least one of these works must be submitted together with the application and complete academic credentials by January 15 of the year of intended enrolment.

Program Requirements

1 Students must take a minimum of five full-course equivalents, 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 the 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 performances totalling the equivalent of a full recital may be substituted.
2 The thesis for the Doctor of Music shall be an extended composition approved by the Department, prepared under the supervision of an advisory committee and defended at the final oral examination.
3 Candidates must complete all requirements for the Mus.Doc. within six years.

COLLABORATIVE PROGRAMS
The Department of Music participates in the following collaborative programs:
1 Book History and Print Culture
2 Editing Medieval Texts
For details, consult the separate entries in this calendar.

COURSES OF INSTRUCTION
Final course offerings may vary. Students should consult the departmental handbook.

M.A./Ph.D. in Musicology
MUS 1000H Introduction to Music Research I/ C. Cain
MUS 1001H Introduction to Music Research II/ C. Clark
MUS 1063H Musical Notation of the Middle Ages/J. Haines
MUS 1128H Music-Text Relationships in the Renaissance/J. Haines
MUS 1202H Music in the Mid-Eighteenth Century/M. A. Parker
MUS 1250H Ph.D Seminar/R. Elliott
MUS 1257H Minimalism/R. Hartenberger
MUS 1259H World Music Pedagogy/C. Cain
MUS 1260H Music of Haiti/G. Averill
MUS 1326H The Bach Cantatas/G. Johnston
MUS 1435H Nineteenth-Century Piano Music/ G. Jones
MUS 1953H The Music of John Beckwith/ J. Mayo
MUS 1990H M.A. Major Paper
MUS 1998H Individual Reading and Research
MUS 1999H° Research in Musicology
MUS 3101H Seminar in Schenkerian Analysis I/R. McClelland
MUS 3102H Seminar in Schenkerian Analysis II/R. McClelland
MUS 3208H The String Quartet in the Twentieth Century/ R. McClelland
MUS 3226H Computer Applications in Music/ D. Patrick
MUS 3308H Introduction to Research in Music Theory/R. McClelland
MUS 3310H The Symphonies of Shostakovich/A. Rapoport
MUS 3403H Seminar in the Theory and Analysis of Atonal and Serial Music/M. Sallmen
MUS 3404H Extended Tonal Techniques in Twentieth Century/M. Sallmen
MUS 3409H Advanced Analysis—Musicfrom Bach to c. 1850/J. Kruspe
MUS 3801Y Advanced Electroacoustic Composition/ C. Hatzis
MST 2048H Music in Medieval Life/J. Haines
MST 3501H Introduction to the Medieval Christian Liturgy/J. Haines

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

Mus.M./Ph.D. in Music Education
MUS 2004H Music in Childhood/L. Dolloff
MUS 2111H Research Methods in Music Education/L. Bartel
MUS 2151H Philosophical Foundations of Music Education
MUS 2161H Curriculum Development in Music Education/L. Dolloff
MUS 2175H Teacher Perspectives in Music Education/L. Bartel
MUS 2176H Social Psychology of Music Education
MUS 2180H Seminar in Canadian Musical Education/P. Shand
MUS 2182H Issues in Music Education
MUS 2185H Curriculum and Instruction in Instrumental Music/C. Walter
MUS 2199H° Special Topics in Music Education
MUS 2201H Music Performance in Music Education/D. Rao
MUS 2222H Choral Literature and Conducting I/D. Rao
MUS 2223H Choral Literature and Conducting II/D. Rao
MUS 2990Y° Mus.M. Major Essay (Music Education)
MUS 2995Y° Music Education Doctoral Research Project

Mus.M./Mus.Doc. in Composition
MUS 3100Y Mus.M. Advanced Composition I
MUS 3101H Seminar in Schenkerian Analysis I/R. McClelland
MUS 3102H Seminar in Schenkerian Analysis II/R. McClelland
MUS 3105Y Mus.M. Advanced Composition II
MUS 3204H Advanced Orchestration/K. N. Chan
MUS 3208H The String Quartet in the Twentieth Century/ R. McClelland

MUS 3226H Computer Applications in Music/ D. Patrick
MUS 3308H Introduction to Research in Music Theory/IR. McClelland
MUS 3310H The Symphonies of Shostakovich/A. Rapoport
MUS 3300Y Mus.Doc. Advanced Composition I
MUS 3305Y Mus.Doc. Advanced Composition II
MUS 3403H Seminar in the Theory and Analysis of Atonal and Serial Music/M. Sallmen
MUS 3404H Extended Tonal Techniques in Twentieth Century/M. Sallmen
MUS 3409H Advanced Analysis—Music from Bach to c.1850/J. Kruspe
MUS 3415H Introduction to Operatic Composition
MUS 3420H Composing of Percussion/ C. Hatzis
MUS 3801Y Advanced Electroacoustic Comoosition/C. Hatzis
MUS 3888Y° Mus.Doc. Recital of Works
MUS 3999Y° Research Project (MusDoc.)

Mus.M. in Performance

MUS 4200Y Seminar in Music Literature
MUS 4213H Advanced Repertoire for Singers and Pianists I/L. MacDonald, C. Stowe
MUS 4214H Advanced Repertoire for Singers and Pianists II/L. MacDonald, C. Stowe
MUS 4220H Orchestral Conducting I/ R. Armenian
MUS 4221H Orchestral Conducting II/ R. Armenian
MUS 4222Y Advanced Orchestral Conducting/ R. Armenian
MUS 4223H Choral Conducting I/D. Rao
MUS 4224H Choral Conducting II/D. Rao
MUS 4225Y Advanced Choral Conducting/ D. Rao
MUS 4231H Advanced Vocal Repertoire Study I/C. Loewen
MUS 4232H Advanced Vocal Repertoire Study IIIC. Loewen
MUS 4238H Performing the Keyboard Music of J. S. Bach/K. Komissaruk
MUS 4239H Seminar in Piano Pedagogy/ M. Koga
MUS 4240H Introduction to Vocal Pedagogy and Vocology/L. MacDonald
MUS 4241H Advanced Vocal Pedagogy and Vocology/L. MacDonald
MUS 4248H Optimizing the Singing Mind/D. Edwards
MUS 4300Y Seminar in Jazz Literature
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/ C. Stowe, C. Loewen, S. Horst
MUS 4502H Collaborative Piano Studio Class/ C. Stowe
MUS 4504H Advanced Song Studies for Pianists/C. Stowe
MUS 4506H Sonata Coaching I/J. Parker, L. Wong
MUS 4507H Sonata Coaching II/J. Parker, L. Wong
MUS 4510H Opera Performance for Pianists/ S. Rolls, S. Horst
MUS 4512H Operatic Repetiteur/S. Ralls, Coordinator
MUS 4600H Performance Practices Before 1800/M. E. Haines
MUS 4606H Special Topics in Performance Practice
MUS 4610H Analysis and Performance: Music of the Eighteenth and Nineteenth Centuries/J. Kruspe
MUS 4615H Analysis and Performance Practices of Twentieth-Century Music
MUS 4620Y Advanced Performance Studies/ R. Rolston
MUS 4700H Major Ensemble I
MUS 4701H Major Ensemble II
MUS 4702H Major Ensemble III
MUS 4703H Major 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/D. Rao
MUS 4715H Chamber Choir II/D. Rao
MUS 4716H Chamber Choir III/D. Rao
MUS 4717H Chamber Choir IV/D. Rao
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
MUS 4733H Performance Studies IV
MUS 4740H Small Group Jazz Performance I
MUS 4741H Small Group Jazz Performance II

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

MUS 4742H Small Group Jazz Performance IV
MUS 4743H Small Group Jazz Performance Ill
MUS 4750H Jazz Orchestra I
MUS 4751H Jazz Orchestra II
MUS 4752H Jazz Orchestra Ill
MUS 4753H Jazz Orchestra IV
MUS 4760H Vocal Jazz Ensemble I
MUS 4761H Vocal Jazz Ensemble II
MUS 4762H Vocal Jazz Ensemble Ill
MUS 4763H Vocal Jazz Ensemble IV
MUS 4900Y Operatic Studies I
MUS 4901Y Operatic Studies II
MUS 4966Y° Operatic Roles I
MUS 4988Y° Operatic Roles II
MUS 6666Y° Recital I
MUS 8888Y° Recital II

Courses recognized for Mus.M. in Performance and M.A. graduate credit
Available to M.A. students only with the permission of the Department.

MUS 1015H Topics in Twentieth Century Music
MUS 1020H Topics in Baroque Music/ G. Johnston
MUS 1025H Topics in Classical Music/ M. A. Parker
MUS 1045H Topics in Renaissance Music/ W. M. Bowen

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

Near and Middle Eastern Civilizations NMC

Graduate Faculty

Full Members

V. Aksan, BA, MLS, MA, PhD
M. Daviau, MA, PhD
H. FOX, BA, BSc, MA, MS, PhD
G. Frame, MA, PhD
D. R. Frayne, MA, PhD
K. A. Grzymski, MA, PhD
S. E. Guenther, MA, PhD
A. Harrak, MA, PhD
T. P. Harrison, BA, PhD (Associate Chair and Coordinator of Graduate Studies)
A. Hassanpour, BA, MA, PhD
P. Kingston, BA, MA, MPhil, DPhil
R. J. Leprohon, BA, PhD
K. T. Meacham, BA, MA, PhD
S. Metso, ThM, ThD
H. Najman, BA,MA.PHD
L. Northrup, BA, MA, PhD
V. Ostapchuk, BA, PhD
J. A. Reilly, BA, MA, PhD (Chair)
M. E. Subtelny, BA, PhD
M. Tavakoli-Targhi, BA, MA, PhD
J. G. Taylor, BA, MTh, MPhil, PhD

Members Emeriti

E. Birnbaum, BA, DipOAS
L. R. Garshowitz, BA, MA, PhD
L. V. Golombek, MA, PhD
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J. S. Holladay, Jr., BD, TD
A. J. Jwaideh, MA, BLitt, DPhil
E. J. Keall, BA, PhD
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M. E. Marmura, MA, PhD, FRSC
B. Peckham, BA, MA, PhL, PhD
A. Pietersma, BA, BD, PhD
E. J. Revell, PhD
R. Sandler, BA, MA, PhD
R. M. Savory, MA, PhD
R. F. Sweet, MA, PhD
J. W. Wevers, BA, ThB, ThD, FRSC
G. M. Wickens, BA, MA
T. C. Young (Jr), BA, PhD

Associate Members

S. Green, BA, MA, PhD
T. Lawson, BA, MA, PhD
R. Mason, BA, PhD
H. Moghissi, BA, MA, PhD
W. A. Saleh, BA, MA, PhD
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Candidates are accepted under the general regulations provided that they also satisfy the departmental requirements for each of the degree programs listed below. Two letters of reference are required and should be sent directly to the Coordinator of Graduate Studies for the Department. All applicants must also submit a statement of academic intent to the Coordinator of Graduate Studies.

Candidates for admission to either the M.A. or Ph.D. program must submit their applications for admission by January 15. No separate fellowship application is required. Later applications will be considered only in exceptional circumstances.

Students applying for admission to the doctoral stream (presently defined as Ph.D. years one to five) will automatically be considered for funding as will continuing doctoral stream students. The funding package includes a minimum basic stipend and fees. Funding is guaranteed for at least five years on the condition that eligibility requirements as outlined in the departmental and SGS awards policies are met. The package may comprise a variety of components such as major external awards, major internal awards, Teaching Assistantships, Research Assistantships, and University of Toronto Fellowships. Presently M.A. students are not included in the funded cohort; therefore, M.A. students should seek funding from other sources.

Besides offering degree programs in Near and Middle Eastern Civilizations, the Department participates in three collaborative programs: Ancient Studies, Jewish Studies, and Women's Studies. For more information on these programs, see the separate entries in this calendar.

Graduate students in the Department of History who are interested in Islamic and Middle Eastern history from medieval to modern times may take courses in Near and Middle Eastern Civilizations and work under the supervision of Near and Middle Eastem Civilizations historians.

Degree of Master of Arts

The requirement for admission to this degree is a four-year B.A. in a relevant program from a recognized university with an average of at least B+, or equivalent, in the final year. Depending upon the amount of undergraduate preparation, candidates may be enrolled in either a two-year or a one-year program, with a normal course load of three courses per year. The Department may recommend enrolment as Special Students to those applicants without sufficient background preparation.

Students desiring a concentration in Islamic Art and Material Culture shall have at least six courses in History of Art and Near and Middle Eastern Civilizations (a minimum of two in each), and a reading knowledge of French or German at the time of admission. This is normally a two-year program.

Degree of Doctor of Philosophy

Before being accepted as candidates for this degree, applicants must normally have obtained an M.A. degree in a relevant program from a recognized university with at least an A-average or equivalent in the courses taken for the M.A. program and must also satisfy the Department as to their ability to do independent research. At its discretion, the Department may offer direct entry to exceptionally qualified applicants with a bachelor's degree. The program of study for all candidates will be determined in consultation with the Department and will include 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 Ph.D. program.

Evidence of competence in primary source language(s) relevant to the candidate's research must be demonstrated at the time of admission. A candidate shall also be required to submit evidence of ability to read German and French by the time of general examinations. Other languages, such as Latin, Arabic, and Modern Hebrew, may be substituted for one of these, as the case may demand. In some cases, the Department may require competence in another language relevant to the student's program. The choice of language(s) must be approved by the Department.

Candidates for the degree 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 requirements for the degree will normally be six full graduate courses or equivalent. In approved circumstances, credit for up to three of these courses may be provided by the M.A. program or its equivalent.

The following two fields are offered in both the M.A. and Ph.D. programs and are listed together with their sub-fields/areas of specialization:

Ancient Near Eastern Studies

Near Eastern Archaeology (Egyptian, Syro-Palestinian, Islamic)
Assyriology (new students not accepted in this area)
Near Eastern History
Egyptology
Hebrew and Judaic Studies
Aramaic-Syriac Studies
Septuagint Studies (new students not accepted in this area)

Middle Eastern and Islamic Studies

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 (new students not accepted in this area)

Courses of Instruction

1 Languages. A number of graduate courses in Near and Middle Eastern Civilizations demand ability to handle primary sources in the original language or languages. Some of the courses listed below may require reading knowledge of European languages.

2 Course Availability. Not all courses are offered every year. Please consult the Department's Graduate *Handbook* and Web site for courses offered in the current academic year.

Akkadian Language and Literature

NMC 1001Y Introduction to Old Babylonian/Staff
NMC 1002Y Selected Standard Babylonian Texts/Staff
NMC 1003Y Akkadian Historical Texts/Staff
NMC 1006Y Akkadian Literary Texts/Staff
NMC 1008Y Akkadian Letters and Business Documents (Late Period)/Staff

Ancient Egyptian Language and Literature

NMC 1201Y Introduction to Middle Egyptian Dialect/Staff
NMC 1202Y Middle Egyptian Texts/Staff
NMC 1203Y Late Egyptian Texts/R. J. Leprohon
NMC 1204Y Cursive Scripts/ R.J. Leprohon
NMC 1207H Introduction to Demotic/Sfaff
NMC 1209Y Old Egyptian Texts/R. J. Leprohon
NMC 1210Y Ancient Egyptian Historical Texts/Staff

NMC 1213Y Egyptian Religious and Funerary Literature/ R. J. Leprohon

Arabic Studies

NMC 2100Y Intensive Arabic I/Staff
NMC 2101Y Intensive Arabic II/Staff
NMC 2102Y Advanced Standard Arabic/ S. Günther
NMC 2118Y Readings in Mediaeval Arabic Historical Texts/Staff
NMC 2119Y Readings in Mediaeval Arabic Palaeography and Diplomatics/ L. S. Northrup
NMC 2120Y Readings from Muslim Chronicles of the Crusades/Staff
NMC 2130Y Topics in Arabic Literature/ S. Günther
NMC 2131Y Ethics and Education in Medieval Arabic Texts/S. Günther
NMC 2132H Hadith: Classical Religious Literature in Islam/S. Günther
NMC 2133H Medieval Arabic Sources on Islamic Thought/S. Günther
NMC 2134H Classical Arabic Poetry/ S. Gunther
NMC 2135H Story-tellers, Travellers and Warriors in Medieval Arabic Literature/ S. Gunther

Aramaic-Syriac Language and Literature

NMC 1100Y Introduction to Aramaic/A. Harrak
NMC 1101Y Early Syriac Texts/A. Harrak
NMC 1102Y Palestinian Aramaic Texts/ T. Meacham
NMC 1104Y Aramaic Epigraphy/A. Harrak
NMC 1105Y Syriac Historical Texts/A. Harrak
NMC 1106Y Syriac Exegetical Texts/A. Harrak
NMC 1110Y Palestinian Targums/T Meacham
NMC 1111Y Babylonian Aramaic/T. Meacham

Archaeology

NMC 1400Y Introduction to the Archaeology of the Near East/T:P Harrison--
NMC 401Y Prehistory of Western Asia/T: C. Young, Jr.
NMC 405Y Seminar on the Archaeology of Western Asia (1)/T. C. Young, Jr.
NMC 406Y Problems in the Archaeology of Bronze Age Syria-Palestine/T.P Harrison
NMC 407Y Problems in the Archaeology of Iron Age Syria-Palestine/T.P Harrison
NMC 1408Y Seminar in the Archaeology of Syria-Palestine/T.P Harrison
NMC 1410Y The Archaeology and Material Culture of Ancient Egypt/M.A. Wegner
NMC 1411H Near Eastern Ceramics (1)/T.P Harrison
NMC 1412H Near Eastern Ceramics (2)/T.P Harrison
NMC 1414H Egyptian Artifacts/M.A. Wegner
NMC 1415H Archaeology in Egyptian Art/Staff
NMC 1416H Egyptian Iconography/Staff
NMC 1418Y Archaeology of Nubia/K. A. Grzymski
NMC 1419Y Art, Archaeology and Culture of Egypt in the Age of the Pyramids/K. Grzymski
NMC 1420Y Selected Topics in Near Eastern Archaeology/Staff
NMC 1421Y Seminar in Egyptian Archaeology/ M. A. Wegner
NMC 1422Y Polarized-light Microscopy in Archaeology/R. Mason
NMC 1500Y Archaeology, from Alexander to Muhammad/E. J. Keall
NMC 2540Y Islamic Archaeology/E. J. Keall

Art and Material Culture

NMC 1403H Art of Egypt/Staff
NMC 1417H Architecture of Egypt/Staff
NMC 2500H Early Islamic Art and Architecture/L. V: Golombek
NMC 2501H Later Islamic Art and Architecture/L. V: Golombek
NMC 2515Y The Islamic City/E. J. Keall
NMC 2520H Western Medieval Islamic Architecture/L. V: Golombek
NMC 2521H The Taj Mahal and Its Origins: Medieval Islamic Architecture in Iran, Central Asia, and Indial/L. K Golombek
NMC 2526H Islamic Painting/L. V: Golombek
NMC 2527H Islamic Decorative Arts/L. V: Golombek
NMC 2530Y Selected Problems in Islamic Art and Archaeology/Staff

Hebrew Language and Literature

NMC 1300Y Intensive Prerequisite Hebrew/ Staff
NMC 302Y The Psalter/R. T. Lutz
NMC 304Y Biblical Narrative/R. T. Lutz
NMC 305H Early Hebrew Epigraphy/J. B. Peckham
NMC 308H Prophecy in Ancient Israel/ H. Namman
NMC 1309H Wisdom in Ancient Israel/ S. Metso
NMC 1310Y The First Part of Isaiah/R. T. Lutz
NMC 1311Y Post-Biblical Hebrew: Mishnah and Midrashim/H. Fox
NMC 1313H Mishna and Tosefta/T. Meacham
NMC 1316H Modern Hebrew Poetry/H. Fox
NMC 1317H Modern Hebrew Prose/H, Fox

NMC 1318Y Midreshei Halakha/T Meacham
NMC 1324Y Hebrew Legal Codes, Medieval and Modern/H. Fox
NMC 1326Y Topics in Midrashic Literature/ Staff

History

NMC 1608H Life Cycle and Personal Status in Judaism/T: Meacham
NMC 1609H Gender-Related Topics in Jewish Law and Religion/T: Meacham
NMC 2080H Theory and Method in Middle Eastern Studies/A. Hassanpour
NMC 2090Y Islamic History to the Fall of Baghdad/L. S. Northrup
NMC 2095Y The Islamic Response to the Crusades: 1095-1291 A.D./Staff
NMC 2140Y Political and Economic Development in the Arab World from the Tanzimat to 1914/A. Jwaideh
NMC 2145Y Problems of Land Tenure and Tribal Society in the Arab World/ A. Jwaideh
NMC 2155Y The Emergence of Modern Iraq/ A. Jwaideh
NMC 2170Y Topics in Modern Middle East History/J. A. Reilly
NMC 2171Y Social and Economic History of the Modern Middle East/J. Reilly
NMC 2172Y Modern Arab History/J. A. Reilly
NMC 2225Y History of Medieval Iran and Central Asia/M. E. Subtelny
NMC 2310Y Ottoman History to 1800/J.R. Blackburn
NMC 2315Y Seminar in Topics from Ottoman History/J. R. Blackburn

Linguistics

NMC 1651H Northwest Semitic Epigraphy/J. B. Peckharn
NMC 1652H Ugaritic Religious Texts/J. *B.* Peckham
NMC 1653Y Historical Hebrew Grammar/Staff
NMC 1657Y Problems in Hebrew Grammar/ Staff

Persian Studies

NMC 2035Y Women and Writing in Twentieth-Century Iran/R. Sandler
NMC 2200Y Intensive Persian I/Staff
NMC 2201Y Intensive Persian II/Staff
NMC 2220Y Studies in Classical Persian Literature/M. E. Subtelny
NMC 2221Y Medieval Persian Ethical and Advice Literature/M. E. Subtelny
NMC 2222Y Persian Mystical Poetry/ M. E. Subtelny
NMC 2223H The Masnavi of Rumi/M. Subtelny
NMC 2224H Persian Myths, Islamic Legends, and Mystical Allegories/M. Subtelny
NMC 2226Y Readings in Medieval Persian Historical and Documentary Sources/M. E. Subtelny
NMC 2235Y Literature and Society in Twentieth-Century Iran/R. Sandler
NMC 2335Y Persian Literature in the Diaspord R. Sandler

Religion and Philosophy

NMC 1613Y Ancient Western Asiatic Religions/Staff (Ph.D. students in Near and Middle Eastern Civilizations excluded)
NMC 1614Y Ancient Egyptian Religion/R. J. Leprohon (Ph.D. students in Near and Middle Eastern Civilizations excluded)
NMC 2045Y Islamic Philosophical Texts/M.E. Marmura
NMC 2050Y Islamic Theology and Philosophy/ M. E. Marmura
NMC 2052Y Islamic Religious Thought/ T. Lawson
NMC 2053Y Literary Images of the Prophet/ T. Lawson
NMC 2055H The Qur'an and Its Interpretation/ W. Saleh
NMC 2056H Readings in Qur'an and Tafsirl W. Saleh

Research Methodology

NMC 2010Y Bibliographical Problems of Islamic Research/E. Birnbaum
NMC 2030Y Problems of Translation from Primary Sources/Staff

Sumerian

NMC 1701Y Sumerian Historical Texts/Staff

Turkish Studies

NMC 2300Y Intensive Turkish I/V: Ostapchuk
NMC 2301Y Intensive Turkish II/V: Ostapchuk
NMC 2330Y Readings in Ottoman Historical Texts/V: Ostapchuk
NMC 2335Y Ottoman Palaeography and Diplomatics/V: Ostapchuk
NMC 2340Y Studies in Ottoman and Turkish Literature/V: Ostapchuk
NMC 2345Y The Steppe Frontier in Islamic History/V: Ostapchuk

Other Courses

NMC 2000Y Directed Reading/Staff
NMC 2001Y Directed Reading and Research/ Staff

Neuroscience (Collaborative Program)

Program Committee

W. S. Trimble, BSc, PhD/Biochemistry
M. S. Shoichet, SB, MS, PhD, Canada Research Chair/ Biomedical Engineering
B. J. Sessle, BDS, BSc, MSD, PhD, FRSC, Canada Research Chair/Dentistry
M. D. Lewis, BA, MA, PhD, CPsych/Human Development & Applied Psychology
S. Nag, MBBS, MD, MSc, PhD, FRCP(C)/Laboratory Medicine & Pathobiology
N. J. Kabani, Bsc, MSc, PhD/Medical Biophysics
P. L. Carlen, MD, FRCP(C)/Medical Science
M. G. Fehlings, MD, PhD, FRCS/Medical Science
J. C. C. Roder, BA, PhD/Molecular & Medical Genetics
J. W. Wells, BScPhm, MSc, PhD/Pharmaceutical Sciences
W. M. Burnham, BA, PhD/Pharmacology
J. O. Dostrovsky, BSc, MSc, PhD/Physiology (Director)
Z. Jia, PhD/Physiology
E. F. Stanley, PhD, Canada Research Chair/Physiology
J. S. Yeomans, BA, PhD/Psychology
W. E. McIlroy, BSc, MSc, PhD/Rehabilitation Science
L. F. De Nil, MSc, PhD/Speech-Language Pathology
J. Peever, BSc, MSc, PhD/Zoology

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The graduate departments of Biochemistry, Biomaterials and Biomedical Engineering, Dentistry, Human Development and Applied Psychology, Laboratory Medicine and Pathobiology, Medical Biophysics, Medical Science, Molecular and Medical Genetics, Pharmaceutical Sciences, Pharmacology, Physiology, Psychology, Rehabilitation Science, Speech-Language Pathology, and Zoology participate in the graduate program in Neuroscience at the University of Toronto. Participating departments in the program contribute courses and provide facilities and supervision for graduate research. Candidates 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 follow a program of studies acceptable to both the participating department and the Neuroscience Program. Upon successful completion of the requirements, students receive in addition to the master's degree or Ph.D. in their departmental area, the notation "Completed Collaborative Program in Neuroscience" on their transcripts and 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 department. The Program in Neuroscience Web site provides summaries of research fields of all the faculty in the program and their departmental 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.

Program Requirements

1 The thesis topic must be in the neuroscience area.
2 The student's supervisor must be a member of the Program in Neuroscience (PIN).
3 The student must have an adequate background in general neuroscience.
4 The student must complete at least one half-course for the master's degree and at least one full course (or equivalent) for the Ph.D. degree from the list of courses approved by the Program in Neuroscience which is listed below.
5 The student must attend the Annual PIN Poster Day and present hs/her work at least once.
6 The student must attend at least 75% of the lectures in the PIN Distinguished Lecturers Series.

Courses of Instruction

Neuroscience courses offered by the participating departments 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
JNS 1001H	Neuroanatomy of Mind

JNS 1010H Analytical Neuroscience
JPM 1005Y Behavioural Pharmacology
JPY 1007Y Neuropharmacology of Neurotransmitter 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 Neuropharmacology
PSL 1026H Neurophysiological Experimentation
PSL 1033H Motor Control Systems
PSL 1047H Somatosensory Physiology and Pain
PSL 1052H Fundamentals of Ion Channel Function
PSL 1053H Critical Assessment of Ion Channel Function
PSL 1059H Auditory and Vestibular Physiology
PSL 1062H Risk Factors/Neurophysiological Consequences in Developmental Neurological Disorders
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 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
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
REH 1510H Disordered Restorative Motor Control
ZOO 1026H Advanced Topics in Neurophysiology

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 1024H Endocrinology and Neuroendocrinology
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

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

Nuclear Engineering

Education and research in Nuclear Engineering includes the study of nuclear processes for purposes such as power generation, medicine, irradiation technology, and industrial use of radioisotopes. The main subjects of study include nuclear reactor research (in reactor materials and heat transfer), nuclear safety, radiochemistry, radiation chemistry, environmental monitoring, and non-destructive testing.

Opportunities for research in areas relevant to Nuclear Engineering exist primarily in the Departments of Chemical Engineering and Applied Chemistry, Mechanical and Industrial Engineering, Materials Science and Engineering, and the Institute for Aerospace Science and Engineering. Some relevant courses are listed in the respective calendar entries of various departments within the Faculty of Applied Science and Engineering.

Candidates may obtain further information on enrolment procedures, academic requirements, and scholarship applications from the Coordinator of Graduate Studies in each of these Departments.

Nursing Science NUR

Graduate Faculty

Full Members

D. Affonso, BS, MN, MA, PhD
G. J. Andrews, BA, PhD
J. Angus, RN, BScN, MScN, PhD
H. M. Arthur, BScN, MScN, PhD
S. Baruchel, BSc, MD
A. Bierman, BA, MD, MS, Ontario Women's Health Council Chair in Women's Health
B. E. Chalmers, BA, MA, PhD
L. Cicutto, BScN, MSc, PhD
P. N. Corey, BSc, MA, PhD
P. C. Coyte, BA, MA, PhD
D. Crooks, BScN, MScN, DNSc
C. E. Dennis, BScN, MScN, PhD
A. DiCenso, BScN, MSc, PhD
D. M. Doran, RN, BA, MHSc, PhD
M. J. Esplen, RN, BScN, MScN, PhD
M. G. Evans, BSc, MScTech, MIA, PhD
M. Fitch, BN, MScN, PhD
D. Gastaldo, BScN, MA(M), PhD
P. Goering, RN, BSN, MSN, PhD
E. M. Hillan, RN, BScN, RM, MPhil, MSc, PhD
E. Hodnett, BSN, MScN, PhD, CIHRKHSRF, Reisman Chair in Perinatal Nursing Research
N. Khanlou, RN, BScN, MSc, PhD
H. Laschinger, BN, MAM, PhD
G. P. Latham, BA, MS, PhD, FRSC
J. Liaschenko, BS, MA, MS, PhD
H. Maclean, BSc, MSc, DipNutr, EdD
P. **D.** McKeever, BN, MSc(A), PhD
C. Muntaner, MD, PhD, Psychiatric &, Addiction Nursing Research Chair
L. O'Brien-Pallas, BScN, MScN, PhD, National Research Chair in Nursing Human Resources
E. H. Peter, BScN, BA, MScN, PhD
(Coordinator of Graduate Studies)
D. M. Pringle, BSCN, MS, PhD
S. Sidani, BSN, TD, MS, PhD
A. Singer, MD, MPH, FRCPC
B. Stevens, BScN, MScN, PhD, Signy Hildur Eaton Chair in Pediatric Nursing Research
D. L. Streiner, BA, MS, PhD, CPsych
A. Tourangeau, RN, BScN, MN, PhD
J. Tranmer, BScN, MSc, PhD
J. H. Watt-Watson, BscN, MScN, PhD
D. Zakus, BSc, MES, MSc, PhD

Members Emeriti

G. J. Donner, RN, BScN, MA, PhD, Order of Ontario
R. M. Gallop, BScN, MScN, PhD
J. E. Graydon, BScN, MS, PhD

Associate Members

I. Bajnok, BScN, MScN, PhD
M. Ballantyne, RN, BScN, MScN, MHSc
A. Bjelajac Mejia, BA, BSPharm, PharmD
V. Grdisa, BScN, MS, ACNP
M. F. Ferguson Pare, BScN, MPh, PhD
C. Galloway, BScN, MScN
E. Green, BScN, MSc
P. E. Green, BSc, BScN, MHSc
D. N. Guerriere, PhD
R. S. Hagey, BScN, MA, PhD
B. A. Hayhoe, BTech, MN
D. Howell, BScN, MScN, PhD
P. Hubley, RN, BScN, MScN
C. M. Jonas-Simpson, BScN, MN, PhD
s. Katz, BA, MA, PhD
K. Kaufman, BSN, PhD
M. Keatings, MHSc
R. N. F. Lee, BScN, MScN, PhD
K. S. LeGrow, BN, MN
G. A. Macdonald, RN, BScN, ME4 EdD
K. MacMillan, RN, BSc, MA, MSc
S. McGilton, BScN, MScN, PhD
K. Metcalfe, BScN,PhD
G. J. Mitchell, BScN, MScN, PhD
L. M. Nagle, BNSc, MScN, PhD
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M. Risk, MSCN
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M. Vahabi, BScN, MHSc, PhD
M. H. van Soeren, PhD
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G. Wilson, RN, BScN, MScN
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E-mail: inquirymrsing@utoronto.ca
Web: www.nursing.utoronto.ca

Degree of Master of Nursing

The purpose of the Master of Nursing (M.N.) program is to prepare 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
a Adult acute care
b Child acute care

For Nursing Administration and Clinical Nursing fields, the program requirement is nine courses, including one clinical course.

For the Acute Care Nurse Practitioner field, the program requirement is seven half-courses (including two clinical courses) and one full course. This field of study is offered in both e-learning and campus-based formats.

Admission Requirements

Candidates must hold the B.Sc.N. degree of the University of Toronto or an equivalent degree. Candidates must have obtained at least a mid-8 standing in the final year of undergraduate study and, in addition, must have obtained at least B standing in the next-to-final year. Candidates seeking admission to the Acute Care Nurse Practitioner field must also have two years of clinical experience. For further information about admission requirements and for application forms, please contact the Graduate Department of Nursing Science. Deadline for applications is February 1.

Course and Degree Requirements

1 To qualify for the degree, a candidate shall complete a program of study outlined by the Graduate Department of Nursing Science.
2 Students are strongly encouraged to enrol on a full-time basis; however, a part-time option is available. Part-time students must be enrolled at minimum in two out of three sessions in each academic year.
3 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 Nursing/Master of Business Administration Program

The combined M.N./M.B.A. Program is designed to permit students to obtain both the M.N. and M.B.A. degrees in three full-time years of study (seven part-time years). Students are required to spend the first two years of residency completing the first year programs of the M.N. and M.B.A. degrees, respectively.

Admission Requirements

Admission to the combined Program is conditional upon independent admission to each of the participating graduate departments. Candidates will normally be required to complete separate application forms on a concurrent basis and pay the application fees for admission to the M.N. Program and the M.B.A. Program.

Candidates must satisfy the full requirements for each of the participating graduate departments. The aggregate criteria listed below must be satisfied to ensure that an application is considered complete for the purpose of entry into the M.N/M.B.A. Program. Candidates must:

1 be accepted under the general regulations of the School of Graduate Studies. Meeting the minimal requirements does not ensure admission,
2 hold a University of Toronto B.Sc. degree in Nursing, or a degree from an equivalent program in a recognized university.
3 have obtained a B+ standing in the final year of undergraduate study and, in addition, must have obtained at least a B standing in the next-to-final year. It is expected that the student will have obtained good academic standing in non-nursing as well as nursing subjects.
4 have undertaken the Graduate Management Admissions Test (GMAT) and have obtained a satisfactory score.
5 have at least two years of work experience within the health care field.

Course and Degree Requirements

The M.N. component of the combined M.N./M.B.A. Program comprises six required courses including one clinical course. The M.B.A. component of the combined M.N./M.B.A. Program comprises 15 required courses of different weights and 5 elective courses.

During the first year of the Program, students will be enrolled exclusively in the Joseph L. Rotman School of Management.

During the second year of the Program, students will be enrolled in the Faculty of Nursing and will be expected to complete

- four half courses for the M.N. degree
- one M.B.A. required course at the 2000 level

- one second year elective course in the Joseph L. Rotman School of Management.

In the third year of the Program, students will be required to complete a series of courses selected from a prescribed menu of graduate M.N. and second-year M.B.A. courses drawn from the curricula of both faculties. A list of these courses is determined by the Coordinator of the combined M.N./M.B.A. Program in consultation with the two faculties.

Combined Master of Nursing/Master of Health Science (Health Administration) Program

At press time, this program was pending final approval. Please contact the Department for details.

The Combined M.N./M.H.Sc. (Health Administration) 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 M.N. and M.H.Sc. (Health Administration) degrees within 2.5 years of full-time study.

During the first year of the program, students enrol in the Faculty of Nursing and complete eight half-courses for the M.N. degree. During the second year, students enrol in the Department of Health Policy, Management and Evaluation (HPME) and complete 11 half-courses towards the M.H.Sc. (Health Administration) degree plus two electives that can be taken from either degree program. In the third year, two-half courses are taken in HPME.

Admission Requirements

Admission to the combined program is conditional upon independent admission to each of the participating graduate units. Candidates will normally be required to complete separate application forms on a concurrent basis and pay the application fees for admission to the M.N. Program and the M.H.Sc. (Health Administration) Program.

Candidates 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 M.N./M.H.Sc. (Health Administration) Program. Candidates must:

1 be accepted under the general regulations of the School of Graduate Studies. Meeting the minimum requirements does not ensure admission.

2 hold a University of Toronto B.Sc. degree in Nursing or a degree from an equivalent program in a recognized university.

3 have obtained a B+ standing over the last two years of undergraduate study. The candidate is expected to have good academic standing in non-nursing as well as nursing subjects.

4 have successfully completed an introductory course in statistics prior to admission.

5 have at least three years of work experience in the health care field.

Program Requirements

The M.N. component of the Combined M.N./M.H.Sc. (Health Administration) Program comprises eight required half-courses. The M.H.Sc. (Health Administration) component comprises 13 required half-courses. In addition, the Combined Program requires two elective half-courses that can be taken from either the M.H.Sc. or M.N. course offerings.

Degree of Master of Science

This program is not open for admission for the current academic year.

Degree of Doctor of Philosophy

The purpose of the program leading to the degree of Doctor of Philosophy is to prepare scientists with the required analytical and research skills for the study of clinical or administrative nursing problems.

Each candidate will choose to study in one of three research fields:

1 Nursing science of healthy individuals, families, and communities;

2 Nursing science of individuals and families experiencing acute and chronic illness;

3 Science of nursing administration.

The program of study will include a minimum of five courses, including NUR 1081Y PhD. Student/Faculty Seminars, and a thesis.

Admission Requirements

Candidates must have a University of Toronto master's degree in nursing or a degree from an equivalent nursing program in a recognized university. Candidates must have achieved at least a B+ standing in their master's program. For further information about admission requirements and for application forms, please contact the Graduate Department of Nursing Science. Deadline for applications is February 1.

Course and Degree Requirements

1 In order to qualify for the degree, a candidate shall complete a program of study approved by the Graduate Department of Nursing Science. The student's program will be planned in con-

sultation 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 May 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.

2 All requirements for the degree must be completed satisfactorily within six calendar years from the date of the student's first enrolment in the Ph.D. program.

Flexible-time 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 above for the full-time Ph.D. program. However, students will have up to eight years to complete the program. An examination of the dissertation proposal is required, usually in the third year and no later than the fourth year. Students are required to pay full-time fees for the first four years of their program; thereafter, they will pay part-time fees.

Collaborative Programs

Students in the Graduate Department of Nursing Science may choose to participate in the following collaborative programs:

1 Aging and the Life Course
2 Bioethics
3 Ethnic and Pluralism Studies
4 Health Care, Technology and Place
5 Health Services and Policy Research
6 Women's Studies

For more information, consult the separate entries in this calendar.

Courses of Instruction

NUR 1012H Culture and Relations
NUR 1013H Transcultural Health Care Issues
NUR 1014H The Politics of Aboriginal Health
NUR 1016H Health Systems, Policy, and the Profession
NUR 1017H History of Ideas in Nursing Practice
NUR 1021 H Nursing Ethics
NUR 1022H Research Design, Appraisal, and Utilization
NUR 1023H Critical Issues in the Design and Conduct 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.
NUR 1024H Foundations of Qualitative Inquiry
NUR 1025H Doing Qualitative Research: Design and Data Collection
NUR 1026H 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.
NUR 1031 H Technology and Place in Contemporary Health Care Work
NUR 1032H Group Process and Professional Practice
NUR 1033H Current Mental Health Issues and Their Implications for Practice
NUR 1034H Program Planning and Evaluation in Nursing
NUR 1037H Aging and Place: Social and Policy Transitions
NUR 1039H Women's Health Across the Lifespan
NUR 1040H Issues in Women's Health Care
NUR 1041H Caring for Children: Places, Programs and Caregivers
NUR 1042H Responses of Children and Families to Illness in Childhood
NUR 1043H Theories of Interpersonal Process
NUR 1044H "Thinking" About Children: Implications for Health Care Research, Practice and Policy
NUR 1045H Theories of Pain: Impact on the Individual, Family and Society
NUR 1046H Persistent Illness: Theoretical, Research and Practice Implications
NUR 1047H Community Participation and Health
NUR 1048H Politics of Health in the Community
NUR 1049H Nursing Approaches to Common Physiological and Behavioural Manifestations of Critically III Patients
NUR 1050H Coping With Illness
NUR 1051H Assessment and Management of Common Responses to Illness
NUR 1052H Perinatal Nursing Sciences
NUR 1056H Places, Programs, and People Who Provide Care
NUR 1058H Aging, Gender and Equity

NUR 1059H Informatics: Theory and Application in Nursing
NUR 1060H Leadership and Management of Nursing and Health Services
NUR 1061H Patient Information Systems/ Workload Measurement
NUR 1062H Measuring Nursing Care Effectiveness: Economic and Financial Perspectives
NUR 1064H Behaviour in Health Care Organizations
NUR 1066H Theoretical Basis for Methodology for Quality Improvement in Nursing Services
NUR 1067H Recovery-Oriented Mental Health Systems of Care
NUR 1068H Youth and Mental Health Promotion
NUR 1072Y Practice Scholarship
NUR 1080H Theoretical Perspectives in Nursing Science
Required course for Ph.D. students only
NUR 1081Y Ph.D. Student/Faculty Seminars
NUR 1090H Measuring Nursing Phenomena
Prerequisite: completion of an advanced graduate level statistics course
NUR 1100Y Pathophysiologic Concepts and Therapeutics
NUR 1101H Advanced Health Assessment and Clinical Reasoning (Adult)
Pre- or corequisite: NUR 1022H
NUR 1102H Advanced Health Assessment and Clinical Reasoning (Child)
Pre- or corequisite: NUR 1022H
NUR 1109Y Advanced Nursing Practice in Caring for Clients and Families I
Prerequisites: Successful completion of NUR 1017H, NUR 1022H, NUR 1101H or 1102H, NUR 1103H, and NUR 1104H
NUR 1110Y Advanced Nursing Practice in Caring for Clients and Families II (Credit/No Credit)
Prerequisite: NUR 1109Y.
Pre- or corequisite: NUR 1034H

Joint Courses

JNH 5001H Health Care Settings: Issues, Concepts, Measures and Policies
JNH 5002H The Body, Health Care, Technology and Place
JPX 1001H Parenting: Multidisciplinary Perspectives

Nutritional Sciences NFS

Graduate Faculty

Full Members

J. P. Allard, MD, FRCP(C)
G. H. Anderson, SSC, MSc, PhD
M. C. Archer, MA, MSc, PhD, DSc, Earle W. McHenry Professor (Chair)
N. F. Boyd, MB, ChB, MD, DSc, FRCP(C), The Lau Family Chair in Breast Cancer Research
A. El-Sohemy, BSc, PhD, Canada Research Chair
C. E. Greenwood, BSc, MSc, PhD
D. J. Jenkins, BA, MB, BS, MA, MD, PhD, Canada Research Chair
Y. Kim, MD, FRCP(C)
N. Kreiger, BA, MPH, MPHIL, PhD
L. A. Leiter, BSc, MD, FRCP(C)
R. A. Mendelson, BA, MS, DSc
G. E. McKeown-Eyssen, BSc, MSc, PhD
I. C. Munro, BSc, MSc, PhD, FRCPath
S. Narod, BSc, MD, FRCP(C), PhD
D. L. O'Connor, SASC, RD, MS, PhD
P. B. Pencharz, MB, ChB, PhD, FRCP(C)
V. S. Tarasuk, BA, BEd, BASc, MSc, PhD (Coordinator of Graduate Studies)
L. Thompson, BSc, MSc, PhD
R. Veith, PhD
V. Vuksan, BSc, MSc, PhD
W. E. Ward, BASc, MSc, PhD
T. M. Wolever, BA, BM, BCh, MA, MSc, PhD, DM
S. Zlotkin, BSc, MD, PhD, FRCP(C)

Members Emeriti

G. H. Beaton, BA, MA, PhD
W. R. Bruce, BSc, MSc, PhD, MD, FRCP(C), FRSC
K. N. Jeejeebhoy, MB, BS, PhD, MRCP, FRCP(C), FRCP(E)
M. Krondl, BSc, PhD
A. V. Rao, BSc, MSc, PhD

Associate Members

R. O. Ball, BSc, MSc, PhD, PAg
P. B. Darling, BSc, MSc, PhD, RD
A. L. FOX, BAA, MHSc, RD, PhD
P. Gillies
R. G. Josse, MBBS, BSc FACP, FRCP, FRCP(C)
A. J. LeVitt, MBBS, DGo, FRCP(C)
D. W. L. Ma
H. MacLean
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The Department of Nutritional Sciences offers graduate programs in the basic science, clinical, and community aspects of human nutrition. Research projects range from the molecular to the community level of inquiry. Candidates with appropriate preparation in health sciences will be admitted under the general regulations of the School of Graduate Studies.

A Ph.D. or M.Sc. degree in Nutritional Sciences with specialization in Biomedical Toxicology can be taken through this Department. For details of the collaborative program, please consult the appropriate entry in this calendar.

Degree of Master of Science

Candidates are admitted under the general regulations of the School of Graduate Studies. Students with diverse backgrounds are encouraged to apply.

The minimum admission requirement is an A-standing in the final two years or evidence of strong potential as a researcher.

The minimum program length for full-time students is 12 months. Candidates will attend and participate in NFS1204Y *Master's Seminars in Nutritional Sciences* throughout their period of full-time registration and will 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. In addition, a course in statistical methods or research design and analysis is required if not completed previously. Submission of a thesis on an approved research area and its defence at an oral examination are required.

A limited number of students will be admitted to the M.Sc. program on a part-time basis.

Degree of Master of Health Science
(Community Nutrition)
See Department of Public Health Sciences for information.

Degree of Doctor of Philosophy
Candidates may enter the Ph.D. program 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. They may also enter the Ph.D. program with an appropriate M.Sc. degree with at least an A-standing or evidence of strong potential as a researcher.

Exceptional students may be allowed to reclassify into the Ph.D. program after one year without completing the M.Sc. on the recommendation of an advisory committee and successful completion of a reclassification examination.

The residence requirement for candidates admitted with a bachelor's degree is three years. Candidates admitted with a master's degree have a residency requirement of two years.

Although it is expected that students from either background can complete their Ph.D. in a period of four years of full-time study, research, and thesis preparation, some students may require longer.

During this time candidates will attend and participate in NFS 1304Y Doctoral Seminars in *Nutritional Sciences.* Those entering with a bachelor's degree will also complete a minimum of six half-courses; those entering with an M.Sc. 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 candidates 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. The student will also complete a comprehensive examination in nutritional sciences. To qualify for the Ph.D. degree, a thesis must be submitted and the student must pass the departmental examination before proceeding to the final oral examination conducted by the School of Graduate Studies.

Courses of Instruction
Not all courses are offered every year. Please consult the Department for course offerings.

NFS 1201H Public Health Nutrition/V. Tarasuk
NFS 1204Y° Master's Seminars in Nutritional Sciences (Credit/No Credit)/Staff
NFS 1208H Field Observation and Nutrition Program Laboratory I/A. Fox
NFS 1209H Field Observation and Nutrition Program Laboratory II/A. Fox, M. Morris
NFS 1210H Field Observation and Program Laboratory Ill: Management of Community Food Programs/ A. *Fox,* B. Yee
NFS 1211H Community Nutrition/A. Fox
NFS 1212H Regulation of Food Safety/ H. Anderson
NFS 1216H Selected Topics Nutrition/Staff
NFS 1218H Recent Advances in Nutritional Sciences I/Staff
NFS 1219H Recent Advances in Nutritional Sciences II: Diet and Cancer/ M. Archer
NFS 1220H Clinical Nutrition/D. Jenkins, P Pencharz, P. Darling
NFS 1221H Nutrition Programs and Strategies/A. Fox
NFS 1222H Recent Advances in Nutritional Sciences II: Diet and Cardiovascular/\/: Vuksan
NFS 1301H Directed Reading in Nutritional Sciences/Staff
NFS 1304Y° Doctoral Seminars in Nutritional Sciences (Credit/No Credit) /Staff
NFS 1484H Advanced Nutrition/ C. Greenwood

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

Occupational Therapy OCT

Graduate Faculty

Full Members

A. Colantonio, BA, BSc, MHSc, PhD
D. R. Dawson, BSc, MSc, PhD
S. Friefeld, BSc(OT), MA, PhD
B Kirsh, BSc(OT), MEd, PhD
A. Mihailidis, BASc, MASc, PhD, PEng
H. Polatajko-Howell, BOT, MEd, PhD, OT(C) (Chair)
S. Rappolt, BSc(OT), MSc, PhD
D. T. Reid, BSc(OT), MEd, PhD
R. M. Renwick, BA, Dip(P&OT), PhD

Members Emeriti

J. Friedland, BA, Dip(P&OT), MA, PhD

Associate Members

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L. Cockburn, BComm, BSc(OT), MEd
S. Farrow, BA, BSC(OT)
A. Fourt, BSc(OT), MEd
D. A. Hebert, BSc(OT), MScKin
S. Langlois, BHSc(OT), MSc
P. Mckee, Dip(OT), BSc(OT), MSc
P. Rigby, Dip(OT), MHSc (Coordinator of Graduate Studies)
B. Secker, BA, MA, PhD
J. Stier, BMR OT(C), MEd
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Degree of Master of Science in Occupational Therapy

There are two routes to completing the M.Sc.OT program:
1 Primary Route
2 Advanced Standing Option

1 Primary Route

The objective of the professional Master of Science program in Occupational Therapy (M.Sc.OT) is to prepare graduates to:

a 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,
b supervise rehabilitation assistants, OT aides, or other support workers,
c use principles of research-based practice to guide and evaluate service delivery,
d contribute to research that will advance the knowledge base of the discipline,
e assume management roles,
f take leadership roles in the profession,
g take leadership roles in health care and other sectors including social services, education, and labour,
h fill academic-practitioner positions, and
i pursue doctoral studies and careers in academia or clinical research.

The M.Sc.OT 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.

2 Advanced Standing Option

The objective of the Advanced Standing Option is to provide advanced standing entry to the M.Sc.OT program for candidates with a bachelor's degree in Occupational Therapy. It is designed to enable qualified occupational therapists to acquire further professional education at a master's level and thereby attain a professional M.Sc.OT degree. Applicants should note that completion of this program will not result in eligibility to practice; applicants must be eligible to practice in Canada, or to write the CAOT exam, before any firm offer of admission can be made.

Admission Requirements

Apply to the Department using the Ontario Rehabilitation Sciences Programs Application Service (ORPAS) at www.ouac.on.ca/orpas/, a centralized service of the Ontario Universities' Application Centre. The application (COMPASS.ORPAS) and complete instructions are available online. All admission requirements

are outlined in the application. Applications are available approximately mid-October each year, and the submission deadline is approximately mid-May.

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 is a condition of admission and must be met by the end of April. This requirement may be satisfied through the successful completion of one of the English language proficiency tests listed in the School of Graduate Studies Calendar with at least the minimum acceptable scores listed therein. The Department strongly prefers the Test of English as a Foreign Language (TOEFL) and requires a minimum score of 600 on the paper-based test or 250 on the computer-based test, accompanied by a minimum score of 5 on the Test of Written English.

1 Primary Route

Admission is determined through an evaluation of academic and non-academic materials, with heavier weighting placed on the academic materials. Eligible applicants must have 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. To determine initial ranking only, the Department will review the last 10 full-course equivalents completed at the undergraduate level by the application deadline. Prior study in statistics, physiology/biology (vertebrate), and psychology may enhance students' learning in the program.

2 Advanced Standing Option

Admission is based on a combination of marks and a letter of intent. Eligible applicants must be graduates of a university-based occupational therapy program, approved by the World Federation of Occupational Therapists (WFOT), who hold a four-year bachelor's degree in occupational therapy (or its equivalent) from a university program recognized by the School of Graduate Studies, University of Toronto, with a minimum mid-B standing in the final year. Applicants must have a minimum of two years of work experience in occupational therapy and be eligible to practice in Canada, or to write the Canadian Association of Occupational Therapists (CAOT) Certification Exam, as documented by the CAOT. Exceptional candidates who do not meet all of the above criteria may submit their application for review on an individual basis.

Program Requirements

1 Primary Route

This is a two-year program of continuous study. The curriculum is presented in six consecutive sessions, with a range of two to six concurrent courses in each session. First year courses include research; foundations of occupational science; occupational therapy practice; structure and function; psychological, neuromotor and neuro-cognitive perspectives. Second year students engage in intensive research projects and three parallel courses in enabling occupation across childhood, adulthood, and older adulthood, respectively. There are four full-time block fieldwork components within the program of study. Methods of study include interactive classes, divergent case method, skill labs, self-study, computer-assisted instruction, and fieldwork. Students enter the program in September, complete the required 23-course program in 24 consecutive months through full-time study, and graduate at Fall Convocation.

2 Advanced Standing Option

This program is offered on both a full-time and part-time basis and can be completed within 12 to 16 months full-time or approximately two years part-time. There are 4.5 full-course equivalent credits in the program (i.e., nine half-course credits). Seven of the half-course credits are derived from four required courses which are taken in this Department and include research, foundations of occupational science, an intensive research project, and independent reading. The remaining two credits are taken according to the student's area of special interest and should support their research and/or practice area.

Required Courses of Instruction

1 Primary Route

OCT 1111Y Foundations of Occupational Science: The Occupational Paradigm/R. Renwick

OCT 1121H Research Issues and Approaches in Occupational Therapy/ B. Kirsh, J. Davis

OCT 1122H Methods in Practice-Based Research/S. Friefeld

OCT 1123H Framing Practice-Based Research/Staff

OCT 1131H Occupational Therapy Practice I/ S. Rappolt

OCT 1132H Occupational Therapy Practice II/ O. Cameron. B. Secker. J. Stier

OCT 1133H Occupational Therapy Practice III/ A. Duncan
OCT 1141H Assessment in Occupational Therapy/B Trentham
OCT 1152Y Musculoskeletal Structure and Function/P. McKee
OCT 1162Y Psychosocial Perspectives in Occupational Therapy/B. Kirsh
OCT 1172Y+ Neuro-motor/Neuro-cognitive Perspectives in Occupational Therapy/D. Hebert, D. Cameron
OCT 1183Y Occupational Therapy Fieldwork I/J. Stier
OCT 1190Y° Building Practice Through Mentorship/B. Trentham
OCT 1220Y° Graduate Research Project/ A. Mihailidis
OCT 1251H Enabling Occupation with Children: Part I/P. Rigby
OCT 1252H Enabling Occupation with Children: Part II/D. Reid,
OCT 1261H Enabling Occupation with Adults: Part I/Staff
OCT 1262Y Enabling Occupation with Adults: Part II/Staft D. Dawson, P. McKee
OCT 1271H Enabling Occupation with Older Adults: Part I/ A. Colantonio
OCT 1272H Enabling Occupation with Older Adults: Part II/Staff
OCT 1281Y Occupational Therapy Fieldwork IV/J. Stier
OCT 1282Y Occupational Therapy Fieldwork III/J. Stier.
OCT 1283Y Occupational Therapy Fieldwork IV/J. Stier

2 Advanced Standing Option

OCT 1111Y Foundations of Occupational Science: The Occupational Paradigm/R. Renwick
OCT 1121H Research Issues and Approaches in Occupational Therapy/ B. Kirsh, J. Davis
OCT 1124H Independent Reading and Research/Staff
OCT 1220Y° Graduate Research Project/ *A. Mihailidis*

°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

Graduate Faculty

Full Members

P. J. Ballantyne, BA, MA, PhD
R. Bendayan, BScPharm, PharmD
B. M. Bowen, BScPhm, MScPhm
U. Busto, PharmD
T. V. Chalikian, BS, MS, PhD
Y. L. Cheng, SB, SM, PhD
T. R. Einarson, BScPhm, MEd, MPharm, MSc, PhD
J. Gariepy, BSc, PhD
D. M. Grant, BSc, PhD
D. R. Hampson, BS, MS, PhD
K. W. Hindmarsh, BSPhm, MSc, PhD, FCSFS (Dean)
A. Holbrook, MD, BScPhm, PharmD, MSc
S. Ita, MD, ABCP
G. Koren, MD, FRCP(C)
M. D. Krahn, BA, MD, MSc
P. I. Lee, BS, PhD
R. B. Macgregor, BS, PhD (Chair)
L. D. MacKeigan, BScPhm, PhD
J. A. Marshman, BScPhm, MSc, PhD
L. J. Muzzin, BA, MA, MA, PhD
K. S. Pang, BScPhm, PhD
P. Pennefather, BSc, PhD
M. Piquette-Miller, BScPhm, PhD
R. M. Reilly, BScPhm, MScPharm, PhD
B. A. Saville, BSc, PhD
M. Spino, BScPharm, PharmD
J. J. Thiessen, BScPhm, MSc, PhD
J. P. Uetrecht, BS, MS, MD, PhD, Canada Research Chair
J. W. Wells, BScPhm, MSc, PhD
P. G. Wells, BScPhm, PharmD
X. Y. Wu, BSc, MScEng, PhD

Members Emeriti

L. Endrenyi, PhD
J. G. Nairn, Ph.D.
P. J. O'Brien, BSc, MSc, PhD *(Coordinator of Graduate Studies)*
J. B. Robinson, BSc, MSc, PhD
H. Segal, BScPhm, MS, PhD

Associate Members

C. J. Allen, BSc, PhD
Z. H. Austin, BScPhm, MBA, MIS, MEd, PhD
J. Bajcar, BScPhm, MScPharm, EdD, FCSHP
W. R. Battle, BScPhm, PharmD
H. S. Boon, BScPhm, PhD
J. C. Cohen, BA, MA, PhD
I. Crandall, BSc ,MSc ,PhD
J. R. D'cruz, BA, MEA, DBA
P. V. Grootendorst, BA., MA, PhD
B. G. Hardy, BScPhm, PharmD
J. T. Henderson, B.A., Ph.D.
L. P. Kotra, BPhm, PhD
E. A. Papadimitroupoul, BSc, BSP, MScPharm, PhD
B. A. Sproule, BScPhm, PharmD
A. A. Taddie, BSc, MSc, PhD
S. Tailor, PharmD
S. E. Walker, BScPhm, MScPharm

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The Department of Pharmaceutical Sciences offers research opportunities and courses in four principal areas:

1 Molecular Pharmacology and Toxicology
drug receptor interactions, molecular biology, electrophysiology, biochemistry, clinical, adverse drug reactions and drug metabolism

2 Pharmaceutics
pharmaceutical and medicinal chemistry, pharmaceutical formulations, radiopharmaceutical synthesis, drug discovery, and biophysical chemistry

3 Pharmacokinetics
basic pharmacokinetics and clinical research

4 Social and Administrative Pharmacy
sociology of health, social psychology, health policy and health economics

DEGREE OF MASTER OF SCIENCE

Admission Requirements

1 Applicants to the M.Sc. program must hold a four-year University of Toronto B.Sc. degree or its equivalent from a recognized university.

2 Applicants are admitted under the general regulations of the School of Graduate Studies. Applicants must also satisfy the Pharmaceutical Sciences Graduate Admissions Committee, which will take into account the background and accomplishments of the applicant, academic standing (applicants must usually achieve at least a mid-B average in each of the last two years of their undergraduate program), and financial support from the potential supervisor.

3 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 TOEFL and have a minimum score of 600 for the paper-based test or a minimum score of 250 for the computer-based test. The TOEFL must include the Test of Written English or Essay Rating with a minimum score of 5.0. Unless an undergraduate degree has been 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).
4 A limited number of students will be admitted to the M.Sc. program on a part-time basis.

Program Requirements—Full-Time M.Sc.
To qualify for the M.Sc. degree, students must complete the following program requirements:
1 A program of study that provides the appropriate foundation for the thesis research to be undertaken by the student. The program will depend on the background of the student and will be planned in consultation with the supervisor and advisory committee, with the approval of the graduate chair. The student will normally complete two full courses, or equivalent, but a minimum of one full course, or equivalent, is required.
2 Yearly advisory committee meetings.
3 One poster presentation given to all faculty and graduate students at Graduate Research in Progress (GRIP), and attendance at GRIP and Post-GRIP. Students are also expected to attend research seminars.
4 Final seminar (20 to 30 minutes) to be given during the thesis defence.
5 A thesis based on an approved research problem in a field of pharmaceutical sciences.

Program Requirements—Part-Time M.Sc.
All requirements are the same as for the M.Sc. Full-Time program, except for the short research presentation and attendance at Graduate Research in Progress (GRIP). A poster presentation at GRIP is required every other year during enrolment.

DEGREE OF DOCTOR OF PHILOSOPHY

Full-time Ph.D.

Admission Requirements
1 Applicants to the Ph.D. program should hold a University of Toronto M.Sc. degree or its equivalent from a recognized university. Under exceptional circumstances, students may be admitted directly to the Ph.D. program with a four-year B.Sc. degree or its equivalent. Factors to be considered will include academic standing, ability to do research, and financial support from the potential supervisor.
2 Applicants are admitted under the general regulations of the School of Graduate Studies. Applicants must also satisfy the Pharmaceutical Sciences Graduate Admissions Committee, which will take into account the background and accomplishments of the applicant, academic standing (applicants must usually achieve an overall B+ average in their M.Sc. program), and financial support.
3 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 TOEFL and have a minimum score of 600 for the paper-based test or a minimum score of 250 for the computer-based test. The TOEFL must include the Test of Written English or Essay Rating with a minimum score of 5.0. Unless an undergraduate degree has been obtained from a recognized Canadian or U.S. university, the applicant must write the Graduate Record Examination (GRE-General Test) and achieve scores at the 50th percentile ranking or better on the Verbal and Quantitative components and a minimum score of 5.0 on the Analytical Writing component.

Transfer from MSc. to Ph.D.
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 Ph.D. program after one year in the M.Sc. program. The student must have completed at least one full course, or equivalent, with an average grade of A minus and have financial support. A transfer from the M.Sc. program to the Ph.D. program occurs normally within 15 months of the student's first registration in the M.Sc. program. The transferred student must complete all remaining course requirements of the M.Sc. program, except the thesis, in addition to the requirements of the Ph.D. program. Credit is given in the doctoral program for research and graduate courses completed prior to the transfer.

Program Requirements
To qualify for the Ph.D. degree, students must complete the following program requirements:
1 A program of study that provides the appropriate foundation for the thesis research to be undertaken by the student. The program will depend on the background of the student and will be planned in consultation with the supervisor and advisory committee, with the approval of the graduate chair. Students will normally complete two full courses, or equivalent. Stu-

dents admitted directly to the Ph.D. program with a B.Sc. must complete three full courses, or equivalent.
2 Yearly advisory committee meetings.
3 A qualifying examination.
4 Two short research presentations to all faculty and graduate students at Graduate Research in Progress (GRIP), an exit full-length research seminar to be given before the thesis defence, and attendance at GRIP and Post-GRIP. Students are also expected to attend research seminars.
5 A thesis in conformity with the University regulations, based on research conducted while registered in a Ph.D. program at the University of Toronto.
6 Students are required to be on campus and participating full-time (including summer) until all program requirements, with the exception of the thesis, are completed. Course work should normally be completed within the first two years of registration.

Flexible-Time Ph.D.
The Department offers a flexible-time Ph.D. program option for selected students. This program will benefit professionals with career obligations and whose employment is closely related to their intended area of research.

Admission Requirements
Applicants must meet all the School of Graduate Studies and Graduate Department of Pharmaceutical Sciences admission requirements for entry to the Ph.D. program. In addition, a letter of support from the employer is required. The departmental admissions committee will review the applications; admission will be highly selective with preference given to:
a applicants who are members in good standing of a regulated profession or scientific society, and
b applicants who hold a university appointment in Canada at an academic standard equivalent to the University of Toronto Lecturer.

Program Requirements
The program requirements for the flexible-time Ph.D. option are identical to those listed above for the full-time Ph.D. program. The time limit for completion of the flexible-time Ph.D. program option from first registration in the program will be eight years for those with a master's degree and nine years for those with a bachelor's degree. Students must ensure that they have adequate time on campus to attend classes and to fulfil the academic requirements. Full-time registration is required for the first four years 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.

COLLABORATIVE PROGRAMS
The Graduate Department of Pharmaceutical Sciences participates in the following collaborative programs:
1 Addiction Studies
2 Aging and the Life Course
3 Biomedical Engineering
4 Biomedical Toxicology
5 Health Care, Technology and Place
6 Health Services and Policy Research
7 Neuroscience
Consult the separate program entries in this calendar for more details.

COURSES OF INSTRUCTION
Please consult the Department's timetable for courses offered in a given year.

PHM 1107H Advanced Pharmadokinetics Course I/J, J. Thiessen, K. S. Pang, L. Endrenyi
PHM 1108H Advanced Pharmacokinetics Course II/K. S. Pang, J. J. Thiessen, L. Endrenyi
PHM 1109H Recent Developments in Dosage Form Design (prerequisite PHM 224Y or equivalent)/ X. Y Wu
PHM 1110H Chemical Basis of Drug Metabolism/J. P. Uetrecht, Staff
PHM 1111H Research and Statistical Analytical Methods/T: R. Einarson, H. J. Segal
PHM 1114H Special Topics in Radiopharmaceuticals I/B. M. Bowen, R. Reilly
PHM 1115H Special Topics in Radiopharmaceuticals II/R. M. Rei//H B. Bowen
PHM 1116H Pharmacoeconomic Evaluation/ L. D. MacKeigan
PHM 1117H DNA-Drug Interactions/ R. B. Macgregor
PHM 1118H Drug Utilization: Patterns, Outcomes, and Issues in Drug Use Evaluation/T. R. Einarson
PHM 1119Y Graduate Seminar in Social and Administrative Pharmacy/ J. A. Marshman
PHM 1120H+ Selected Research Topics in the Pharmaceutical Sciences/ P.J. O'Brien

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

PHM 1122H Fundamentals of Drug Discovery/ P. Pennefather
PHM 1123H Thermodynamics of Macro-molecular Interactions/ T.V. Chalikian
PHM 1124H The Power and Politics of Global Pharmaceutical Policy/J. Cohen
PHM 1125H Complementary/Alternative Medicine: Health Systems and Policy Issues/H. S. Boon
PHM 1126H The Economics of Health and Health Care/P. Grootendendt
AGE 2000H Principles of Aging/P. Ballantyne
ATS 3700H Multidisciplinary Aspects of Alcohol, Tobacco, and Other Psychoactive Drugs/R. Bendayan, M. J. Ashleg G. Martin
JFK 1120H Selected Topics in Drug Development I/M. Piquette-Miller, E. M. Sellers
JFK 1121H Selected Topics in Drug Development II/X. Y: Wu
JFK 1122H Drug Transport Across Biological Membranes/R. Bendayan, P.S. Pennefather
JNP 1114Y Interdisciplinary Toxicology/Staff
JNP 1016H Graduate Seminar in Toxicology/ P. G. Wells
JNP 1017H+ Molecular and Biochemical Basis of Toxicology//P J. O'Brien, J. T: H. Henderson
JNP 1018H+ Current Topics in Molecular and Biochemical Toxicology/ J. T: H. Henderson, P.J. O'Brien
JPY 1007Y Neuropharmacology of Neurotransmitter Receptors/ P. Seeman, J. W. Wells
JRX 1124H Structure-Based Drug Design/ L. Kotra

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

Pharmacology PCL

Graduate Faculty

Full Members

W. M. Burnham, BA, PhD
U. Busto, PharmD
P. Dorian, MSc, MDCH
R. Frecker, BSc, MD, PhD, LMCC
S. R. George, MD, FRCP
D. M. Grant, BSc, PhD (Chair)
L. A. Grupp, DSC
D. R. Hampson, BS, MS, PhD
P. Harper, BSc MSc, PhD
J. N. Heersche, BSc PhD
T. Inaba, BEng, MSc, PhD
S. Ito, MD, ABCP
S. J. Kish, PhD
G. Koren, MD, FRCP(C)
P. Li, PhD
J. F. MacDonald, BSc, PhD
N. W.. Milgram, BA, MA, PhD
J. Mitchell, PhD
M. J. Moore, MD
C. A. Naranjo, MD
J. N. Nobrega, BA, MA, PhD
B. F. O'dowd, PhD
A. B. Okey, BSc, MSc, PhD
C. R. Pace-Asciak, PhD
K. S. Pang, BScPhm, PhD
J. D. Parker, MD
P. Pennefather, BSc PhD
A. Petronis, MD, PhD
D. S. Riddick, BSc, PhD (Coordinator of Graduate Studies)
B. P. Schimmer, BS, PhD
E. M. Sellers, MD, PhD, FRCP(C)
J. W. Semple, PhD
N. H. Shear, BA, MD, FRCP(C)
O. C. Snead Ill, MD
L. Spero, BPhm, PhD
R. F. Tyndale, PhD
J. P. Uetrecht, BS, MS, MD, PhD, Canada Research Chair
H. M. Van Tol, BSc, MSc, PhD
J. J. Warsh, MD, PhD
J. W. Wells, BScPhm, MSc, PhD
P. G. Wells, BScPhm, PharmD

Members Emeriti

L. Endrenyi, PhD
G. J. Goldenberg, MD
D. Kadar, BSc MSc, PhD
H. Kalant, MD, PhD
W. Kalow, MD
J. M. Khanna, MPharm, PhD
P. J. O'Brien, BSc, MSc, PhD
P. Seeman, BSc, MSc, MDCH, PhD

Associate Members

S. Behrends, MD, PhD
K. Lanctot, Ph.D
A. Le, MSc, PhD
J. P. McPherson, B.Sc., M.Sc., Ph.D.
E. A. Roberts, MD
D. M. Tomkins, Bsc, PhD
A. Wong, MD, PhD
C. Woodland, BSc, MSc, PhD
M. Zack, Bsc, MASc, PhD

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Web: www.utoronto.ca/grdpharm/

Degree candidates are accepted under the general regulations. Research activity in the Department, 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

Degree of Master of Science

Students are admitted under the general regulations of the School of Graduate Studies. However, the Department's Graduate Education Committee must be satisfied about the applicant's background and accomplishments, financial support, and ensure that academic achievement is normally at the B+ average level in the final year of the undergraduate program.

Before obtaining a degree, a student must have a course credit in PCL 1002Y Graduate

Pharmacology. Additional courses may be taken as the academic program requires.

Each student will participate in a research program and present the results of the investigation as a written thesis. The thesis will be read and approved by the supervisor and two appraisers, one of whom should normally be from outside the Department. It will then be orally defended to the satisfaction of a thesis examination committee.

M.Sc. students in the Department of Pharmacology who intend to continue their studies in the Ph.D. program will be evaluated during their M.Sc. oral defence.

Degree of Doctor of Philosophy

Candidates for the degree of Doctor of Philosophy in Pharmacology are normally required to have taken courses in physiology, biochemistry, or allied sciences sufficient to form a foundation for their work in pharmacology. This Department's doctoral program requires a minimum period of two full years of residence. During this 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.

The Department's Graduate Education Committee determines the eligibility of prospective students. The Committee assesses students' ability and potential for advanced study and independent research in pharmacology.

Well qualified students with excellent research potential holding a Bachelor of Science degree may be considered for direct admission to the Ph.D. program by the Department's Graduate Education Committee.

Applicants with M.Sc. degrees from other departments or universities, and students admitted with a Bachelor of Science degree will have their research ability and potential for the program reviewed after completion of one year. Upon successful completion of a departmental seminar and recommendation from the student's advisory committee to the Graduate Education Committee, the student will be permitted to proceed with the Ph.D. program.

Students transferring from the master's program in pharmacology to the Ph.D. program may receive full credit for master's courses towards doctoral course requirements, with the Department's permission.

Before obtaining their degree, all Ph.D. students must acquire graduate course credits in PCL 1002Y Graduate Pharmacology (major subject), PCL 1003Y° Seminars in Pharmacology (Credit/No Credit course), one additional full graduate course (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 students' training experience beyond their particular areas of research focus. During their program, Ph.D. 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. One graduate half-course 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 PCL 1003Y°Seminars ***in Pharmacology,*** the candidate 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.

Candidates for the degree of Doctor of Philosophy 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.

All successful applicants to the M.Sc. and Ph.D. programs are responsible for obtaining research supervision and financial support before they are allowed to officially register in their program.

Collaborative Programs

The Department of Pharmacology participates in the following collaborative programs:

1 Addiction Studies
2 Toxicology, Biomedical
3 Cardiovascular Sciences
4 Neuroscience

For more details, consult the separate program entries in this calendar.

Courses of Instruction

The Department should be consulted each session as to course offerings. Students may also obtain up-to-date course information on the departmental Web site www.utoronto.ca/grdpharm/schedule.htm.

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

PCL 1001Y Systems Pharmacology/Staff
PCL 1002Y Graduate Pharmacology/A.B. Okey, D. S. Riddick
PCL 1003Y° Seminars in Pharmacology (Credit/No Credit)/D. Grant
PCL 1004Y Clinical Pharmacology/G. Koren, Staff
PCL 1009Y Pharmacological Laboratory/Staff
PCL 1012H Cognitive Neuropharmacology/ N. W. Milgram
PCL 1015H Applied Pharmacogenetics and Pharmacogenomics/D. Grant, Staff
JFK 1120H Selected Topics in Drug Development I/E. M. Sellers
JFK 1122H Drug Transport Across Biological Membranes/R. Bendayan, P. S. Pennefather
JNP 1014Y Interdisciplinary Toxicology/ C. Woodland, Staff
JNP 1016H Graduate Seminar in Toxicology/ C. Woodland, Staff
JNP 1017H+ Molecular and Biochemical Basis of Toxicology/P J. O'Brien, Staff
JNP 1018H+ Current Topics in Molecular and Biochemical Toxicology/P. J. O'Brien, J. T. Henderson
JNR 1444Y Fundamentals of Neuroscience: Cellular and Molecular/L. Mills, Staff
JPM 1005Y Behavioural Pharmacology/D. M. Tomkins, Staff
JPM 1008H Psychopharmacology and Women's Health/ E. M. Sellers, Staff
JPY 1007Y Neuropharmacology of Neuro-transmitter Receptors/ P. Seeman, J. W. Wells
JYG 1555H Topics in Cellular and Molecular Neurobiology/J. F. MacDonald, L.-Y. Wang
PHM 1107H Pharmacokinetics Course IIJ. J. Thiessen, K. S. Pang, L. Endrenyi
PHM 1108H Pharmacokinetics Course IIIK. S. Pang, J. J. Thiessen, L. Endrenyi

°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.

Philosophy PHL

Graduate Faculty

Full Members

D. Ainslie, BSc, MA, PhD (Chair)
D. P. Allen, MA, BPhil, DPhil
B. S. Baigrie, BA, MA, PhD
R. Barney, BA, PhD, Canada Research Chair
D. L. Black, BA, MA, PhD
J. M. Boyle, BA, PhD
J. R. Brown, BA MA, PhD (Coordinator of Graduate Studies)
P. Clark, BA, MA, PhD
R. COt'nay, BA, MA, PhD
F. A. Cunningham, BA, MA, PhD, FRSC
D. Dyzenhaus, BA, LLB, DPhil, FRSC
P. Franks, BA,MA,PHD
L. P. Gerson, BA, MA, PhD
R. B. Gibbs, BA, MA, PhD
W. Goetschel, MPhil, PhD
P. w. Gooch, BA, MA, PhD
K. H. Green, BA MA, PhD
J. Heath, BA, MA, PhD
T. Hurka, BA, MA, DPhil, FRSC, Jackman Distinguished Chair
D. S. Hutchinson, BA, BPhil, DPhil
B. C. Inwood, BA, MA, PhD, FRSC, Canada Research Chair
B. D. Katz, BA, MA, PhD
P. King, PhD
M. G. Kingwell, BA, MLitt, PhD
P. Kremer, B.SC, PhD
L. Lange, AB, MA, PhD
C. Misak, BA, MA, DPhil, FRSC
K. P. Morgan, BA, MA, MEd, PhD
M. c. Morrison, BA, MA, PhD
A. Mullin, AB,PhD
D. Novak, AB, MHL, rabbinical diploma, PhD
D. Raffman, BA, PhD
G. Rattan, BA, MA, Phd
A. S. Ripstein, BA, PhD, MSL
M. Rotemond, BA,PHd
W. E. Seager, BA, MA, PhD
S. Sedivy, BA, PhD
V. T. Shen, BA, MA, PhD, Lee Chair
K.-L. Shun, BA, BPhil, MPhil, PhD
B. C. Smith, BS, MS, PhD, Canada Research Chair
G. Sreenivasan, BA, BPhil, PhD, Canada Research Chair
I. L. Stefanovic, BA, MA, PhD
L. W. Sumner, BA, MA, PhD, FRSC, University Professor
S. Tenenbaum, BA, PhD
R. P. Thompson, BA, MA, PhD
A. I. Urquhart, MA, PhD
D. Walsh, BSc, PhD, BA, MPhil, PhD, Canada Research Chair
J. E. Whiting, MA, BA, PhD, Chancellor Jackman Chair

Members Emeriti

J. Canfield, BA, AM, PhD
R. De Sousa, BA, PhD
D. Goldstick, BA, BPhil, DPhil
A. M. Gombay, BA, MA, BPhil
I. M. Hacking, BA, MA, PhD, FRSC, University Professor Emeritus
W. Harvey, BSc, BA, MA, PhD, LL6
G. A. Nicholson, BA, BD, MA, PhD
J. M. Rist, BA, MA, FRSC
T. M. Robinson, BA, BLitt, DLitt
J. H. Sobel, MA, PhD
J. M. Vertin, BA, STB, STL, MA, PhD

Associate Members

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A. Chakravartty, BSc, MA, BPhil, PhD
I. B. Dickie, DPhil, BPhil, BA
J. S. Hawkins, BA, MA, PhD
B. Hellie, BA, PhD
M. Lin, BA, MA, PhD
S. S. Moreau, BA, B.Phil., PhD, JD
J. Nagel, BA PhD
M. Pickave, BA, MA, PhD
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Applicants interested in graduate study in philosophy at the. University of Toronto should consult the Department's *Graduate Bulletin.* This provides complete details of graduate programs, describes course offerings, and supplies short academic profiles of the graduate faculty, including their phone numbers and electronic addresses. One may obtain a printed copy of the *Graduate Bulletin* from the Graduate Office, Department of Philosophy, at a cost of $3.00. An electronic version is available on the World Wide Web at www.philosophy.utoronto.ca/site/graduate/bulletin.html

Application for Admission

The Department admits students to two degree programs: Master of Arts and Doctor of Philosophy. The minimum requirements for admission to these programs are given below, under the headings "Degree of Master of Arts" and "Degree of Doctor of Philosophy." Admission to these programs is highly selective and competitive; those who barely meet the minimum conditions should not expect admission without exceptionally favourable supporting considerations.

All the forms required for application, including the standard application form, can be downloaded from the departmental Web site. The Department does not mail application packages. The Web site also contains detailed instructions for completing applications.

Unless otherwise indicated, applicants must submit the following supporting documents with their applications:

1 One official transcript of the applicant's academic record from each university attended, complete to the time of application.

2 A statement of about 300 words, indicating the applicant's areas of interest in philosophy at the graduate level.

3 A short list of the major readings in each philosophy course taken by the applicant. (This item is not required of applicants from the University of Toronto.)

4 Two letters of reference from philosophy instructors, written on the appropriate forms.

5 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.

6 Candidates for admission to the Ph.D. program are strongly encouraged (but are not required) to submit the results of the Graduate Record Exam (GRE) taken within the preceding 18 months.

7 Applicants whose primary language is not English and who are not graduates of a university whose language of instruction is English must also submit the results of a TOEFL test with a score of at least 600 and of a TWE test with a score of at least 5, or equivalent results in some other recognized test of English-language facility.

The closing date for applications to the Department's degree programs, by which time applicants must have submitted their supporting documentation as well as their completed application, is January 6.

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 are the same as those for the M.A. program, but the deadlines for applications are April 15 for full-time Special Students and August 1 for part-time Special Students.

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.

Degree of Master of Arts

Students approved by the Department are admitted as candidates for this degree under the general regulations of the School of Graduate Studies.

Admission to the M.A. program requires a four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, that includes at least six full courses (twelve half-courses) 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. Students lacking an adequate background in philosophy may be required to complete additional undergraduate courses before being considered for admission. In certain cases, an applicant whose background in philosophy is deficient may be admitted to the M.A. program but may be required to take one or two additional courses, possibly at the undergraduate level.

The program for the M.A. degree consists of a minimum of four full-course equivalents in philosophy. At least one of these full-course equivalents must be in the history of philosophy and at least one must be in the problems of philosophy.

Each M.A. student is assigned to an Advisory Committee, which will recommend a suitable program of philosophy courses. The candidate's choice of courses must be approved by the Department. One member of this committee will serve as the student's Academic Advisor throughout the M.A. program and will be responsible for overseeing the student's progress.

It is possible for a full-time student to complete all requirements for the M.A. degree in the Fall and Winter sessions; however, the Department encourages students to take no more than three full-course equivalents during the Fall and Winter sessions and to complete the last course during the Summer session.

Part-time enrolment in the M.A. program is permitted; the requirements for the degree must be completed within five academic years.

Degree of Doctor of Philosophy

Students approved by the Department are admitted as candidates for this degree under the general regulations of the School of Graduate Studies.

Admission to the Ph.D. program requires either (a) a four-year University of Toronto bachelor's degree, or its equivalent from a recognized university, that includes at least six full courses (twelve half-courses) 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, or (b) 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 satisfy the Department that they are capable of independent research in philosophy at an advanced level.

A candidate admitted to the Ph.D. program shall pursue a program of study and research approved by the Department. The minimum requirements for the degree are as follows:

1 Course Requirements

A candidate admitted on the basis of a four-year bachelor's degree must take a minimum of six full-course equivalents in philosophy, with an average grade of at least an A-. At least two of these full-course equivalents must be in the history of philosophy and at least two must be in the problems of philosophy. A student who fails to maintain an average of at least an A- after completing three full-course equivalents may have their registration terminated.

A candidate admitted on the basis of a master's degree in philosophy must take a minimum of three full-course equivalents in philosophy, with an average grade of at least an A-. At least one of these full-course equivalents must be in the history of philosophy and at least one must be in the problems of philosophy. A student whose M.A. degree does not exhibit sufficient breadth-in particular, does not include the equivalent of at least one full course in the history of philosophy and at least one full course in the problems of philosophy-may be required to take additional courses.

All candidates must complete the proseminar in philosophy (PHL 1111H) during the fall session of their first year. This will count as one half-course equivalent of the requisite number in the program.

With the Department's permission, a student may replace up to one full-course equivalent in philosophy with a graduate course offered by another department, provided that the course is required for the student's planned research.

A doctoral candidate is required to complete at least three full-course equivalents by the end of the first year of registration and to complete any of the remaining course requirements for the degree by the end of the second year.

2 Breadth Requirement

A candidate 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:

a metaphysics, epistemology and philosophy of science,

b values (ethics, politics, aesthetics, and philosophy of religion), and

c mind, language and logic.

Competence in any area is normally established by successful completion of a graduate half-course in that area.

A candidate must also demonstrate competence in logic (defined as proficiency in first-order symbolic logic with identity). This competence is expected of all candidates prior to beginning doctoral studies. Where this is not the case, competence must be acquired as a supplement to the required number of courses and be demonstrated to the satisfaction of the Department by the time the Area Requirement is met.

3 Area Requirement

Before being allowed to proceed with formal research on a thesis topic, the candidate must demonstrate competence in a broader area within which that topic falls. An individual Area Committee (established by the student and approved by the Department) assists in framing that area and compiling an appropriate reading list, and it also approves an appropriate plan for carrying out the research. The research undertaken by the candidate either culminates in a written exam or else consists of a research project. Both paths lead to an oral exam based on the written work and the reading list.

4 Language Requirement

A candidate 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 candidate's area committee may require competence in additional languages deemed necessary for the student's proposed area of research.

5 Thesis

A candidate must submit a thesis on an approved subject and defend the thesis at a final oral examination.

Each candidate carries out thesis research on an approved topic under the guidance of a three-person Thesis Committee, consisting of a Supervisor and two consultants or readers. The Supervisor must normally approve the thesis before it can be submitted by the candidate for defence at a required oral examination. The final oral examination is arranged by the Department in collaboration with the School of Graduate Studies. At least eight weeks must be allowed for all arrangements to be made following submission of the thesis to the Graduate Office.

The Department is not obligated to provide supervision in areas falling outside the competency, interest, or availability of its graduate faculty.

Students are strongly encouraged to plan their studies in such a way as to complete their program within four years of admission from an M.A., or five years of admission from a B.A. Financial support packages are based on this norm, although allowances are made for the higher demands of some collaborative programs.

6 Normal Time Line Through the Program

By the end of the first year of registration in the case of someone admitted on the basis of a master's degree, otherwise by the end of the second year, a candidate should have completed all the course requirements for the degree; by the end of the following year of registration, the candidate should have satisfied any remaining breadth requirements, passed the area examination, and submitted to the Graduate Office the candidate's thesis topic and the names of faculty members who have agreed to serve as supervisor and readers. (These are general deadlines; consult the Department's *Graduate Bulletin* for specific dates and further details.) After this, the candidate begins work on the thesis, which the candidate is expected to complete within two years.

7 Residence

Candidates 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

This combined program enables students to pursue work at the intersection of philosophy and law and to complete both the Ph.D. and the Juris Doctor in a shorter time than would otherwise be the case. Entry to the program requires admission to both the Ph.D. program in philosophy and the J.D. program in law. Separate applications are required.

In the first year of registration, a candidate admitted to the Combined Program will complete the first year of the law curriculum; in the second and third years, the candidate will complete the remaining requirements for the J.D. degree and will begin the course work required for the Ph.D. (Note that some of the courses done in fulfillment of the Ph.D. requirements will be counted for credit towards the J.D.) By the end of the fourth year of registration in the case of someone admitted on the basis of a master's degree, otherwise by the end of the fifth year, a candidate should have completed any remaining course requirements for the Ph.D. degree, satisfied the breadth requirement, and met the area requirement. The candidate then begins work on the thesis. During the first two years of the program, candidates are registered as full-time law students; subsequently, they are registered as full-time doctoral students and are eligible for graduate funding.

Those interested in pursuing this program should consult David Dyzenhaus, Director of the Ph.D. (Philosophy)-J.D. Program, at the Faculty of Law.

Collaborative Programs

The Department participates in the following collaborative programs:

1 Ancient and Medieval Philosophy
2 Bioethics
3 Editing Medieval Texts
4 Environmental Studies
5 International Relations
6 Jewish Studies
7 Women's Studies

For more details, consult the separate entries in this calendar.

Courses of Instruction

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 I Philosophy

Reading Courses

PHL 1000H,Y Reading Course
PHL 1001H,Y Reading Course
PHL 1500H,Y Reading Course

Courses in the 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
PHL 2090H Hermeneutics
PHL 2091H The Critical Theory of Society
PHL 2092H Pragmatism
PHL 2093H Frege
PHL 2094H Russell
PHL 2095H Wittgenstein
PHL 2096H Seminar in Analytic Philosophy
PHL 2097H Topics in Analytic Philosophy
PHL 2099H Bernard Lonergan

Courses in the 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 Freud'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

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 2146Y 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
PHL 2195H Philosophy of Biology
PHL 2196H Topics in the Philosophy of Science
PHL 2199H Seminar in the Philosophy of Science

Miscellaneous

PHL 3000H Teaching Philosophy
PHL 3101H Intensive Special Course
PHL 4900H Research Seminar

Physical Therapy PHT

Graduate Faculty

Full Members

K. Berg (Chair)
D. Brooks, BSc(PT), MSc, PhD
C. Cott, Dip(PT), BPT, DipGer, MSc, PhD
A. M. Davis, BSc(PT), MSc, PhD
S. B. Jaglal, BSc, MSc, PhD
W. E. Mcllroy, BSc MSc, PhD
M. Verrier, DipP&OT, MHSc
K. K. Yoshida, BPhE, BSc(PT), MSc, PhD
N. Young, BSc(PT), MSc, PhD

Associate Members

R. Davies, Dip(PT), BHSc(PT), MSc(PT)
C. Evans, BSc(PT), MSc
B. Gibson, BMR(PT), MSc
C. M. J. Graveline, BSc(PT), MSc, PhD
J. Howe, Dip(P&OT), BSc(PT)
J. Hunter, BPT, MSc
M. D. Landry, BSc(PT), MSc(PT), PhD
J. Laprade, BScPT, MSc, PhD
B. Mori, BSc(PT), MSc
E. Nussbaum, BSc(PT), MEd
K. O'Brien, BSc BSC(PT)
J. Parsons, BA, BSc(PT), MSC
S. Rennie, BPT, MSc PhD
C. H. Reynolds, BSc(PT), BA(PE), MSc
S. L. Switzer-Mcintyre, BPE, BSc(PT), MEd (Coordinator of Graduate Studies)
A. Tang, BSC(PT), MSc

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Degree of Master of Science in Physical Therapy

The purpose of the Master of Science in Physical Therapy (M.Sc.PT) is to graduate practitioners who will:

- be academic physical therapy practitioners who, using advanced technologies, will share their knowledge with students, clients, policy makers, and other professionals in academic health science environments
- have enhanced competency in clinical skills
- participate in clinical and health care research, contributing to the overall body of scientific knowledge
- serve as role models for students and other health professionals as expert consultants in the fields of movement and movement disorders
- be innovative leaders in physical therapy, rehabilitation, and the health care system have ability to act as self-regulating professionals who exhibit strong personal, moral, and ethical values and are cognizant of the changing laws, codes, and guidelines that impact on themselves and their clients
- be creative entrepreneurs with sound business acumen capable of excelling in professional practice in a wide variety of venues
- serve as strong players with exemplary interpersonal skills, secure in their evolving role within a changing health care delivery system
- be strong negotiators and advocates who proactively influence interprofessional politics and health policy with an eye to maintaining and improving not only the health of clients but of the health system as a whole

The Master of Science in Physical Therapy is a 26-month professional program leading to entry to practice accredited by the Accreditation Council for Canadian Physiotherapy Academic Program (ACCPAP). Graduates will be eligible to write the Physiotherapy Competency Examination (PCE) 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. Since the M.Sc.PT program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association, graduates are also eligible to apply for licensure in the United States.

E-Learning Advanced Standing Option

The Master of Science in Physical Therapy e-Learning Advanced Standing Option is a professional graduate degree program that allows physical therapists (with advanced standing) to acquire the entry-to-practice degree on a part-time basis in an online, e-learning environment with two on-campus residencies. Themes of research, business, and professional practices are integrated throughout the curriculum. Students complete a group research project during this one-year program. Graduates of the Uni-

versity of Toronto B.Sc.PT Evidence Based Curriculum program (graduating in years 1998-2003) with a minimum mid-B average are eligible to apply.

Note: This option is offered in 2005-2006; availability in future years is unconfirmed.

Combined M.Sc.PT/M.Sc. (Physical Therapy and Rehabilitation Science)
A combined Master of Science in Physical Therapy/Master of Science option exists allowing students to pursue an academic research career. This option provides an opportunity to fast track towards a Ph.D. program. Students engage in a research program independently and complete the M.Sc. thesis requirements.

Admission Requirements
Applicants to the M.Sc.PT program must have 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 (i.e., 5 full-course equivalents at the senior level). Additional requirements include prerequisite courses in the life and/or physical sciences (one of the two life sciences courses must be a human/vertebrate physiology course); social sciences, humanities or languages (one full-course equivalent); and statistics (half-course). Refer to the departmental Web site (www.utoronto.cdpt) for a full listing of admission requirements.

English Language Facility
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. Applicants must demonstrate facility in the English language through the successful completion of one of the English language proficiency tests listed in the School of Graduate Studies Calendar.

The Department of Physical Therapy strongly prefers that the Test of English as a Foreign Language (TOEFL), accompanied by the Test of Written English (TWE) and the Test of Spoken English (TSE) be used to satisfy the requirement. TOEFL: minimum score of 600 on the paper-based test or minimum score of 250 on the computerized test. TWE: minimum score of 5 on either the paper-based or computerized tests. TSE: minimum score of 50.

If it is impossible for an applicant to take the TOEFL, TWE, and TSE, the Department will accept one of the following:

a the Michigan English Language Assessment Battery (MELAB: minimum score of 85);
b the International English Language Testing System (IELTS: minimum score of 7.0);

Application
To obtain an application, contact the Ontario Universities' Application Centre (OUAC) via the Web or by telephone:
- Web: www.ouac.on.ca/orpas and choose "Request an Application Package" option
- Telephone: (519) 823-1940 ext. 582 (24-hour automated phone request line)

If there are questions regarding the Ontario Rehabilitation Sciences Programs Application Services (ORPAS) application form, please contact orpas@ouac.on.ca or (519) 823-1940 ext. 559. Application forms are available mid-September. The application deadline is mid-January; deadline for transcripts is end of January.

Program Requirements
Candidates enrolled in the full-time program must complete all requirements within 26 months. The curriculum is organized into 12 units and 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. The M.Sc.PT program requires the completion of a research project. Students must demonstrate proficiency in key areas of professional practice, including research practice, prior to graduation.

Note: The M.Sc. degree program in Rehabilitation Science is a research-oriented program for students with a professional physical therapy degree; it does not prepare students for physical therapy in clinical practice or licensure. The primary objective of the MSc. program is to prepare students for doctoral studies in Rehabilitation Science. Successful completion of the program does not guarantee entrance into the Ph.D. program. Consult the Rehabilitation Science entry in this calendar for details.

Courses of Instruction

PHT 1001H Introduction to Professional Physical Therapy Practice, Evaluation and Research/ *D. Brooks, B. Gibson, M. Landry*

PHT 1002Y Cardiorespiratory and Exercise Physical Therapy Practice/ D. *Brooks,* J. *Parsons*

PHT 1003Y Musculoskeletal Physical Therapy Practice/J. Laprade, S. Gabison, E. Nussbaum, S. Rennie

PHT 1004Y Clinical Internship-Cardiorespiratory (Honours/Pass/Fail)/ B. Mori

PHT 1005Y Neurological Physical Therapy Practice/C. Reynolds, W. McIlroy, E. Nussbaum, M. Verrier

PHT 1006Y Research and Program Evaluation for Physical Therapy Practice I/S. Jaglal, C. Cott

PHT 1007Y Clinical Internship-Neuroscience (Honours/Pass/Fail)/B. Mori

PHT 1008Y+ Advanced Neuromusculoskeletal Physical Therapy Practice/ R. Davies, J. Hunter, W. McIlroy, E. Nussbaum, S. Switzer-McIntyre

PHT 1009Y+ Clinical Internship-Musculoskeletal III (Honours/Pass/Fail)/ B. Mori

PHT 1010Y Research and Program Evaluation for Physical Therapy Practice II (Honours/Pass/Fail)/ C. Evans

PHT 1011Y Clinical Internship-Selective (Honours/Pass/Fail)/B. Mori

PHT 1012Y Research and Program Evaluation for Physical Therapy Practice III/K. Yoshida, M. Landry

PHT 1013H+ Professional Practice Issues in Physical Therapy (CR/NCR)/ C. Evans

PHT 1014Y Clinical Internship-Musculoskeletal (Honours/Pass/Fail)/B. Mori

Selective Course

PHT 1015Y Clinical Internship-Physical Therapy Practice (Honours/ Pass/Fail)/B. Mori
PHT 1015Y may replace any one of PHT 1004Y, PHT 1007Y, PHT 1009Y, PHT 1011Y, and PHT 1014Y.

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

Physics PHY

Graduate Faculty

Full Members

P. D. Abbatt, BSc, AM, PhD
D. C. Bailey, BSc PhD
R. C. Bailey, BSc PhD
V. Barzda, MSc, PhD
J. Birgeneau, BSc PhD, FRS
J. R. Bond, BSc, MS, PhD, FRS, FRSC, Fellow CIAR, Fellow APS, University Professor
K. Y. C. Chun, BASc, MA, PhD
R. F. Code, BSc, AM, PhD
R. C. Desai, BSc, PhD
A. Dhirani, Bsc, MSc, PhD
D. J. Donaldson, BSc, PhD
J. R. Drummond, BA, MA, DPhil (Coordinator of Graduate Studies)
D. J. Dunlop, MA, PhD
C. C. Dyer, MSc, PhD
R. N. Edwards, BSc PhD, ARCS
P. A. Griffin, BSc, MSc, PhD
B. Holdom, BSc, MA, PhD
K. Hori, BSc, MSc, PhD
A. E. Jacobs, BASc, MSc, PhD
S. John, PhD, Canada Research Chair
B. A. Jones, BA, MSc, PhD
M. Joy, BSc, MASc, PhD, PEng
S. R. Julian, BSc, MSc, PhD
H.-Y. Kee, BS, MS, PhD, Canada Research Chair
A. W. Key, MA, DPhil
Y. B. Kim, BSc, PhD, Canada Research Chair
Y.-J. Kim, BSc PhD
L. Kofman, MSc PhD, Fellow CIAR
P. Krieger, BSc, MSc, PhD
P. J. Kushner, BSc, MSc, PhD
M. J. Lee
D. Lidar, BSc, MSc, PhD
H. K. Lo, B.A., M.S., Ph.D.
R. K. Logan, BSc PhD
M. E. Luke, PhD
G. J. Luste, BA, PhD
R. S. Marjoribanks, BSc, MS, MSc, PhD
J. F. Martin, PhD
B. Milkereit, Diplom, Dr rer nat
D. R. Miller, BSc, PhD, FRSC, Canada Research Chair
J. X. Mitrovica, BASc, MSc, PhD
G. W. K. Moore, BSc, PhD
S. W. Morris, BSc, MSc, PhD
N. W. Murray, BS, PhD, Canada Research Chair
C. B. Netterfield, BSc, PhD, Fellow CIAR
K. H. Norwich, BSc, MSc, MD, PhD
P. J. O'Donnell, BSc, PhD
R. S. Orr, BSc, PhD, ARCS
A. Paramekanti, BTech, PhD
A. W. Peet, BSc, PhD
W. R. Peltier, BSc, MSc, PhD, FRSC, University Professor
U.-L. Pen, BSc MSc, PhD
E. Poppitz, BSc, PhD
J. S. Repka, BSc PhD
P. E. Savard, BSc, MSc, PhD
T. G. Shepherd, BSc PhD
P. K. Sinervo, BSc, PhD
J. E. Sipe, BSc MSc, PhD
A. M. Steinberg, PhD
K. Strong, BSc, DPhil
A. C. Thompson, BS, PhD
J, H. Thywissen, BS, MA, PhD
W. Trischuk, BSc PhD
H. M. Van Driel, BSc, MSc, PhD, FRSC
M. B. Walker, BEng, DPhil
J. Y. T. Wei, BA, MS, PhD

Members Emeriti

H. R. Cho, BSc, MSc, PhD
T. E. Drake, BSc MSc, PhD
A. E. Litheriand, BSc, PhD, FRSC, FRS, University Professor Emeritus
A. N. May, SA, MSc, PhD
J. M. Perz, BASc, MASc, PhD
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The Department carries out research in experimental and theoretical physics in the following fields: atmospheric physics, geophysics, quantum optics and condensed matter physics, and subatomic physics. The following brochures are available from the Department upon request: *Physics at Toronto* and *Graduate Course Listings.*

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.

Candidates are accepted under the general regulations.

Degree of Master of Science
The program of study for the M.Sc. degree will consist of (a) four graduate lecture courses and a report which has a one-course equivalence, or (b) two graduate lecture courses, the appropriate 6000-series research course, and a report which is equivalent to two courses (PHY 3400Y and the appropriate 7000-series course), or (c) two graduate lecture courses and a thesis. Selection of the program is made by the student and a faculty advisor in consultation with the Associate Chair. The residence requirement for the M.Sc. degree is normally one academic session. All candidates for the M.Sc. degree are expected to attend the weekly general colloquium conducted by the Department.

Degree of Doctor of Philosophy
Candidates are normally admitted to the Ph.D. program after completion of the M.Sc. program or its equivalent elsewhere, but outstanding candidates who do not wish to first obtain their M.Sc. degree may apply for direct entry into the Ph.D. program. The core of the Ph.D. program is an original investigation, the results of which are embodied in a thesis. Lecture courses constitute a subsidiary but important part of the program. For details consult the Department. Normally the equivalent of four graduate courses is required; course credit will normally be given toward the Ph.D. for graduate lecture courses taken during a master's program. Within eight months of starting the Ph.D. program, candidates must pass a qualifying oral examination. Candidates for the Ph.D. degree enrol each year in the appropriate 6000 sequential series of research courses. As an essential part of their research programs, students are expected to attend the weekly general colloquium conducted by the Department.

Both the M.Sc. and Ph.D programs are full-time.

Collaborative Programs
The department participates in the following collaborative programs:
1 Astrophysics
2 Biomedical Engineering
3 Geology and Physics
For more details, consult the separate entries in this calendar.

Courses of Instruction
All courses are not given every year. Please check the departmental brochure or Web site for course availability.

Introductory Courses
JPA 1040Y Advanced Physics and Archaeology
PHY 1406H Microprocessor Interfacing Techniques
PHY 1483H Relativity Theory I
PHY 1484H Relativity Theory II
PHY 1491H Current Interpretations of Quantum Mechanics

General Courses
PHY 1600H Effective Communication for Professional Physicists
PHY 2107H Experimental Methods in Physics

Foundation Courses
PHY 1810H Foundation Course in Particle Physics
PHY 1820H Foundation Course in Astrophysics
PHY 1830H Foundation Course in Atmospheric Physics
PHY 1840H Foundation Course in Geophysics
PHY 1850H Foundation Course in Condensed Matter Physics
PHY 1860H Foundation Course in Quantum Optics

Specialized Courses
PHY 2202H Laser Physics I
PHY 2203H Laser Physics II
PHY 2204H Advanced Quantum Optics
PHY 2205H Special Topics in Quantum optics I
PHY 2206H Special Topics in Quantum Optics II
PHY 2207H Physics of Photonic Crystals
PHY 2208H Linear and Nonlinear Optics I
PHY 2209H Linear and Nonlinear Optics II
PHY 2210H Advanced Quantum Mechanics
PHY 2301H Structure and Dynamics of Condensed Matter
PHY 2303H Topics in Statistical Mechanics
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 2404H Quantum Field Theory
PHY 2405H Experimental High Energy Physics

PHY 2406H Special Topics in Particle Physics I
PHY 2407H Special Topics in Particle Physics II
PHY 2502H Atmosphere-Ocean Dynamics
PHY 2504H Advanced Atmospheric Dynamics
PHY 2505H Atmospheric Radiative Transfer and Remote Sounding
PHY 2508H Atmospheric Chemistry
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 2604H Rock Magnetism
PHY 2605H Advanced Seismology
PHY 2606H Advanced Geodynamics
PHY 2607H Advanced Electromagnetic Methods in Geophysics
PHY 2608H Elastic and Inelastic Waves in Inhomogeneous Media I
JGP 4170H Geotectonics
JPS 3600Y Current Topics in Astrophysics

Report Course for M.Sc. 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+ Laser Physics and Quantum Optics Seminar
PHY 7006Y+ Nuclear Physics Seminar
PHY 7007Y+ Particle Physics and Relativity Seminar

Research Courses
Candidates register in these courses in sequence of the last digit.

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 Laser Physics and Quantum Optics
PHY 6061Y Research in Nuclear Physics
PHY 6071Y Research in Particle Physics and Relativity

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

Physiology PSL

Graduate Faculty

Full Members

S. L. Adamson, BSc MSc, PhD
H. W. Anderson, BSc, MSc, PhD
H. L. Atwood, BA, MA, PhD, DSc, FRSC
P. H. Back, BSc, MSc, PhD, DVM
C. E. Bear, BSc, MSc, PhD
J. Belik
D. D. Belsham, PhD
A. Bocking
R. Boonstra, BSc PhD
D. M. Broussard, BA, PhD
T. J. Brown, BSc, PhD
P. L. Brubaker, BSc, PhD, Canada Research Chair
P. L. Carlen, MD, FRCP(C)
R. F. Casper, MD, FRCSC
R. G. Challis, BSc, PhD, DSc, FIBiol, FRCOG, FRSC
M. P. Charlton, BSc, MSc, PhD (Coordinator of Graduate Studies)
A. L. Coates, BEng(Elect), MDCM
U. De Boni, BSc, MSc, PhD
N. E. Diamant, MDCM, FRCP(C)
J. O. Dostrovsky, BSc MSc, PhD
J. Duffin, BASc, MASc, PhD
I. G. Fantus, BSc, MDCM, FRCP(C)
A. Giacca, MD
R. C. Goode, BPhE, BA, MA, DPhil
G. R. Greenberg, BSc, MD, FRCP(C)
R. V. Harrison, BSc PhD, DSC
R. L. Horner, PhD
M. Husain, BSc, MD
K. N. Jeejeebhoy, MB, PhD, MRCP, FRCP(C), FRCP(E)
A. Klip, MSc, PhD, FRSC
H. C. Kwan, BASc, MSc, PhD
M. Liu, MSc, MD
P. LiU, msc, phd
S. J. Lye, BSc, MI, PhD
J. F. MacDonald, BSc PhD (Chair)
W. A. Mackay, BSc, MSc, PhD
S. G. Matthews, BSc, DPhil
W. E. McIlroy, BSc, MSc, PhD
F. Miller, BSc, PhD, Canada Research Chair
L. R. Mills, BSc, PhD
K. H. Norwich, BSc, MSc, MD, PhD
H. M. O'Brodovich, MD
B. Orser, MD, FRCPS(C), PhD
C. Y. Pang, BSc, MSc, PhD
P. Pennefather, BSc PhD
M. E. Percy, BSc, MA, ARCT, PhD
M. J. Plyley, BSc, PhD
M. Post, PhD, DVM, Canada Research Chair
R. M. Post, Msc PhD
J. C. C. Roder, BA, PhD
C. D. Rodgers, BPE, MHK, PhD
N. D. Rosenblum, BSc, MD, FRCPS(C)
M. W. Salter, MD, PhD
B. P. Schimmer, BS, PhD
L. C. Schlichter, BSc, MSc, PhD
B. J. Sessle, BDS, BSc, MSD, PhD, FRSC, Canada Research Chair
I. A. Sherman, BSc MSc, PhD
F. K. Skinner, BMath, MASc, PhD
M. J. Sole, BSc, MD, FRCP(C)
E. F. Stanley, PhD, Canada Research Chair
N. B. Sweezey, BSc, MD
A. K. Tanswell, MBBS, DObstRCOG, MRCP, LMCC, FRCP
S. G. Thomas, BSc, MSc, PhD
W. S. Trimble, BSc, PhD
G. Tsushima, BSc(Hon), PhD
D. B. Tweed, MD, PhD
M. T. Tymianski, MD, PhD, FRCS(C)
M. Verrier, DipP&OT, MHSc
M. Vranic, MD, DSc, FRSC
L. Y. Wang, PhD
L. West
M. B. Wheeler, BSc PhD
G. Wilson, PhD, MSc
G. J. Wilson, BSc, MSc, MD, FRCP(C)
C. Wittnich, MSc, DVM
J. M. Wojtowicz, BSc, PhD
C. C. Yip, BSc, PhD
M. Zhen, BSc, PhD, Canada Research Chair
M. Zhuo

Members Emeriti

G. M. Brown, MD, FRCS(C), PhD
D. G. Butler, BSc, MSc, PhD, DSc, FIBiol
G. Steiner, BA, MD, FRCP

Associate Members

I. Caniggia, MD, PhD
Z. P. Feng, MD, PhD
W. Frankland, Neuroscience
Y. Gaisano, BS, MD, FRCP(C)
S. Heximer, PhD
W. D. Hutchison, PhD
Z. Jia, PhD
N. Jones, MD, FRCPC, PhD
S. Josselyn, Neuroscience
A. Jurisicova
G. Lewis, MD, FRCP(C), Canada Research Chair
F. Liu
W. LU, MD, PhD
p. Monnier, Neuroscience
R. C. Renlund. DVM

A. Salapatek, PhD
S. Sugita, BA, MA, PhD
Q. Wan, MD, PhD
Q. Wang, MD, PhD
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Research in the Department of Physiology proceeds at levels from the gene to the organism in areas including:
- endocrinology and diabetes
- reproduction endocrinology
- fetal physiology, pregnancy, and parturition
- neuroendocrinology
- cardiorespiratory regulation
- gastrointestinal motility
- sensory physiology
- motor control
- brain development and aging
- ionic channels and synaptic transmission
- excitability, ultrastructure and plasticity of the brain

Admission is determined by the Department of Physiology Graduate Studies Committee and is based on academic record, an essay summarizing background strengths and scientific aims, and at least two confidential letters of reference. 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). The admission standard for the paper-based TOEFL is a minimum score of 600 accompanied by the Test of Written English (TWE) with a minimum score of 5.0. For the computer-based TOEFL the minimum score is 250 with an Essay Rating score of at least 5.0. Other English proficiency tests are acceptable. Please consult the Web site for departmental standards.

Degree of Master of Science

Admission Requirements

Acceptance normally requires a 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. Candidates should have taken courses in biochemistry, calculus, organic and physical chemistry, general physics, and physiology.

Program Requirements

The course requirement is one full-credit or two half-credits in Physiology graduate-only courses. Students entering the graduate program will usually have taken a major advanced review course in physiology and will have obtained at least B+ for such a course. For such students a half-credit graduate course in physiology plus a suitable extradepartmental graduate half-credit course may be approved. Courses should be selected in consultation with the supervisor and/or advisory committee. Candidates are expected to attend the departmental seminar series and must present and defend a research thesis acceptable to the graduate department in order to qualify for the degree.

After 12 to 18 months in the M.Sc. program, students will either write and defend an M.Sc. thesis and graduate, write and defend a thesis and go on to the Ph.D. program, or transfer directly into the Ph.D. program. Direct 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 M.Sc. 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 M.Sc. is not a reason for transfer to the Ph.D. See the Physiology Web site for a detailed outline of course requirements.

Physical Sciences Stream

Special incentives are in place to encourage students from undergraduate programs in physics, mathematics, engineering, and other sciences to apply to the M.Sc. program. Students enrolled in the Institute of Biomaterials and Biomedical Engineering who are registered through the Department of Physiology will take the introductory physiology review course JPB 1022H as part of their master's course requirement.

Degree of Doctor of Philosophy

Admission Requirements

Candidates should have taken courses in biochemistry, calculus, organic and physical chemistry, general physics, and physiology. Candidates may be admitted through transfer from the M.Sc. program or after completion of the M.Sc. degree program or its equivalent from a recognized university. For exceptional students with an A standing in appropriate courses taken during the two preceding undergraduate years, direct entry into the doctoral program is possible. However, this will require specific approval by the Graduate Studies Committee.

Program Requirements

The course requirement is a total of two full credits or four half-credits in which an average standing of at least A- is maintained. Course requirements for candidates transferring from a Physiology master's degree program is one full-course credit; these students will have fulfilled the requirements for the M.Sc. of one full credit. Up to one full credit can be claimed from the student's M.Sc. program completed in another department or university, subject to approval by the Graduate Studies Committee. PSL1066H Ph. D. Research Grant Proposal is a mandatory course and counts as 0.5 credit. The remaining credits must be graduate-only courses. Courses should be appropriate for the proposed research program and should be selected in consultation with the student's advisory committee. Consult the Physiology Web site for details of course requirements. A research proposal for the candidate's research program over the ensuing three years, prepared according to the CIHR grant format, must be presented to members of the graduate department within 13 months of entering the Ph.D. program (within 9 months for a student transferred from the M.Sc. program). The proposal should include a full background for the expected results, pitfalls, alternate strategies, and a budget. A student who fails to submit or to pass the proposal must withdraw from the program.

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 about four years, by which time the candidate will write and defend a research thesis acceptable to the graduate department and the School of Graduate Studies in order to qualify for the degree.

Collaborative Programs

The department participates in the following collaborative programs:

1 Biomedical Engineering (M.Sc., Ph.D.)
2 Cardiovascular Sciences (M.Sc., Ph.D.)
3 Developmental Biology (Ph.D.)
4 Neuroscience (M.Sc., Ph.D.)

For more details, consult the separate entries in this calendar.

Courses of Instruction

Students should consult the departmental Web site for course descriptions and availability at www.uoftphysiology.com. Some courses are offered in alternate years only and some courses may not be given if too few students apply.

Graduate students from other departments who wish to take a course in physiology should consult the Department of Physiology.

Please refer to the Department of Physiology Web site for important details regarding course requirements.

JCV 3060H	Advanced Topics in Cardiovascular Sciences-Molecular Biology and Heart Signal Transduction/ R. Tsushima
JCV 3061H	Advanced Topics in Cardiovascular Sciences-Hormones/ C. Wittnich
JCV 3062H	Advanced Research in Cardiovascular Sciences-Heart Function/C. Wittnich
JCV 3063H	Advanced Research in Cardiovascular Sciences-Vascular/ C. Wittnich
JNR 1444Y	Fundamentals of Neuroscience: Cellular and Molecular (joint graduate/undergraduate)/ L. Mills, J. Eubanks, Staff
JNS 1000Y	Fundamentals of Neuroscience: Systems and Behaviour (joint graduate/undergraduate)/ D. Broussard, Staff
JPB 1022H	Human Physiology as related to Biomedical Engineering/Staff
JPB 1055H	Bioengineering for Life Scientists/ Staff
JYG 1555H	Topics in Cellular and Molecular Neurobiology/L.-Y. Wang, J. F. MacDonald
PSL 1024H	Endocrinology and Neuroendocrinology/D. Belsham, Staff
PSL 1026H	Neurophysiological Experimentation/Z,-P. Feng, Staff
PSL 1033H	Motor Control Systems/D. Tweed

PSL 1034H Advanced Topics in Physiology: Metabolic Disorders/ M. B. Wheeler

PSL 1036H Advanced Respiratory Physiology/J. Duffin

PSL 1038H Volume, Electrolyte, and Pressure Regulation in Body Fluid Compartments/Staff

PSL 1047H Somatosensory Physiology and Pain/J. O. Dostrovsky, B. J. Sessle

PSL 1052H Fundamentals of Ion Channel Function (joint graduate/ undergraduate)/ P. Backx, Staff

PSL 1053H Critical Assessment of Ion Channel Function/P. Backx, Staff

PSL 1054H Physiological Instrumentation and Electronics (joint graduate/ undergraduate)/M. P. Charlton, J. Duffin

PSL 1059H Auditory and Vestibular Physiology/R. V. Harrison, R. D. Tomlinson

PSL 1060H Developmental Cardiovascular Physiology (joint graduate/ undergraduate)/C, Wittnich

PSL 1061H Reproductive Physiology (joint graduate/undergraduate)/ T. Brown

PSL 1066H+ Ph.D. Research Grant Proposal (Credit/No Credit)/Staff

PSL 1303Y Advanced Physiology (joint graduate/undergraduate)/ M, P. Charlton, Staff

PSL 1421H Pregnancy and Birth: From Implantation to Newborn (joint graduate/undergraduate)/ S. J. Lye, Staff

PSL 1425H Integrative Metabolism and Its Endocrine Regulation (joint graduate/undergraduate)/ A. Giacca, G. H. Anderson, I. G. Fantus, V. M. Watt

PSL 1432H Theoretical Physiology (joint graduate/undergraduate)/ K. H. Norwich

PSL 1460H Molecular Physiology (joint graduate/undergraduate)/ V. M. Watt, Staff

PSL 1462H Molecular Aspects of Cardiac Function (joint graduate/ undergraduate)/P. Backx, Staff

PSL 1472H Sleep Physiology and Chronobiology (joint graduate/ undergraduate)/R. Stephenson, R. L. Horner

PSL 1480H Investigative Developmental Physiology/S. Matthews

PSL 1497H Scientific Communication (joint graduate/undergraduate)/ V. M. Watt

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

Planning PLA

Graduate Faculty

Full Members

C. G. Amrhein, BSc, PhD, MClP
M. F. Bunce, BA, PhD
A. Daniere, AB, MPP, PhD, MCIP
P. Desrochers, BSc,MA,PhD
M. L. Diamond, MSc, PhD
R. J. DiFrancesco, MA, PhD, MClP
M. S. Gertler, BA, MCP, PhD, MCIP, Goldring Chair in Canadian Studies (UC), Vice-Dean Graduate Research & Education
E. Gilbert, BA, MA, PhD
K. Goonewardena, BSc MPI, PhD
R. Hackworth, BA, MA, MEP, PhD
L. D. Harvey, BSc, MSc, PhD
J. D. Hulchanski, BA, MSc(PI), PhD, MCIP, Chow Yei Ching Social Work Chair in Housing
R. A. Levit, BA, MArch
R. D. Lewis, BA, MA, PhD
V. W. Maclaren, BA, MRP, MSc, PhD, MClP
D. A. McQuillan, BA, MA, PhD, DipEd
W. Michelson, AB, AM, PhD, FRSC, S.D. Clark Chair in Sociology
E. J. Miller, BASc, MASc, PhD, Bahemanenbaum Professor
J. R. Miron, BA, MA, MSc, PhD
W. Prudham, BArtSc, MA, PhD
K. Rankin, BA, MRP, PhD
E. C. Relph, BA, MPh, PhD
S. Ruddick, BES, MA, PhD, MClP
A. Sorensen, BA MS, PhD
S. Wakefield, BA, MA, PhD
R. R. White, BA, MSc, PhD
K. Wilson, BA,MA,PhD

Members Emeriti

L. S Bourne, BA, MA, PhD, FRSC, MCIP, Hon Causa (Director)
J. N. Britton, BA, MA, PhD
G. H. Gad, DrPhil, PhD
J. T. Lemon, MS, PhD
S. T. Roweis, MSc, PhD
J. Simmons, MA, PhD
J. B. Whitney, PhD, MCIP

Associate Members

P. Bedford, BA, MA
A. Boland, BA, MAIS, PhD
T. Conway, BSc,MA,PhD
J. Farrow, MBA, MClP
M. Goldhar, BA
T. H. Heslip, MA
M. Hess, BA,MUP,PhD
J. Layton, BA, MA, PhD
S. Makuch, LLM
D. Mcgregor, BSc, MES, PhD
I. Savan, BSc PhD, MCIP
E. Slack, BA, MA, PhD
P. Van Loan, LLB, MSCPI
R. M. Wright, BScRec, MLA

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Degree of Master of Science in Planning
This program, leading to a Master of Science in Planning (M.Sc.PI.), is directed toward professional education in the fields of urban, environmental, economic, and social planning, as well as urban design. Almost half of the program deals with a core of material considered essential to general practice, while the remainder allows the candidate to specialize in one of five sub-fields. Workshops and seminars in the program provide contact with many senior professionals engaged in public and private practice. The program also provides access to courses and research facilities available in many other graduate departments, centres, and institutes across the University.

Admission Requirements
Candidates are admitted under the general regulations of the School of Graduate Studies. In addition, applicants must have an average of at least B+ standing in the social or life sciences, or the humanities, or the professions. A knowledge of introductory economics and statistics, as well as word processing and spreadsheet skills, is preferred prior to entry.

Program Requirements
Candidates 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.

Note: *All courses are not given every year; some faculty members may be on research leave. Please consult the departmental graduate office for details.*

1 The program consists of 16 half-courses, taken over 2 years. This includes the following six required courses (the core):

PLA 1101H Issues in Planning History, Thought, and Practice/ S. Roweis, Staff
PLA 1102H Urban and Regional Dynamics/ R. J. DiFrancesco
PLA 1103H Legal Basis of Planning/S. M. Makuch
PLA 1105H Planning Decision Methods/ V. Maclaren
PLA 1106H Workshop in Planning Practice/ S. Ruddick, Staff
PLA 1107Y Current Issues Paper/Staff

2 A further nine half-course equivalents (exclusive of PLA 4444H) are chosen from the following list of electives and from the offerings of other departments, centres, and institutes. At least five of these half-course equivalents must fit into an approved specialization in one of the following fields:

Urban Planning and Development
Environmental Planning
Social Planning and Policy
Economic Planning and Policy
Urban Design

3 The requirements for the degree must be completed within six years of first registration in the program.

4 Normal Timing

First Year		Second Year	
Fall Session	Winter Session	Fall Session	Winter Session
1101H	1102H	1106H	1107Y
1105H	1103H	1107Y	3 electives
2 electives	2 electives	2 electives	

Elective Courses

JPG 1402H Environment and Development/ A. *Boland*
JPG 1404H Issues in Global Warming/ L. D. Harvey
JPG 1413H Workshop in Environmental Impact Assessment/Staff
JPG 1414H Cities as Ecosystems/R. White
JPG 1415H Environmental Justice/R. Jackson
JPG 1416H Environmental Consequences of Land Use Change/T: Conway
JPG 1418H Rural Land Use Planning/ M. Bunce
JPG 1419H Aboriginal/Canadian Relations in Environmental and Resource Management/D. McGregor
JGE 1420H Urban Waste Management: an International Perspective/ V. Maclaren
JPG 1421H Health in Urban Environments/ S. Wakefiled
JPG 1501H The Political Economy of Cities/ J. Hackworth
PLA 1503H Planning and Social Policy/ S. Ruddick
JPG 1506H Urban and Regional Social Policy: An International Perspective/ S. Ruddick
JPG 1507H Housing and Housing Policy/ L. S. Bourne
JPG 1508H Planning with the Urban Poor in Developing Countries/A. G. Daniere
JPG 1509H Gender Planning and the Politics of Development/K. Rankin
JPG 1510H Recent Debates on Urban Form/ A. Sorensen
JPG 1544H Transportation and Urban Form/ P. Hess, A. Sorensen
PLA 1551H Policy Analysis/J. Farrow
PLA 1552H City Planning and Management/ J. Farrow
PLA 1553H Urban Transportation Policy Analysis/Staff
PLA 1601H Environmental Planning and Policy/ V: Maclaren
GGR 1602H Industry: Location, Behaviour, and Policy/J. Britton
JPG 1609H Cities, Industry and the Environment/P Desrochers
JPG 1614H Regional Development and Policy/ M. S. Gertler
JPG 1615H Planning and Financing the Social Economy/K. Rankin
PLA 1650H Urban Design: History Theory Criticism/K. Goonewardena
PLA 1651H Planning and Real Estate Development/M. Goldhar
PLA 1652H Introductory Studio in Urban Design and Planning/ K. Goonewardena

PLA 1653Y	Advanced Studio in Urban Design and Planning/P. Hess, Staff
PLA 1654H	Urban Design Research Methods/ P. Hess
PLA 1655H	Urban Design and Development/ P. Hess
JPG 1670H	Regional Economic Analysis/ R. J. DiFrancesco
JPG 1702H	Historical Urban Geography and Planning/R.D. Lewis
JPG 1710H	Historic Preservation Planning/ Staff
JPG 1713H	Place, Design, and Landscape/ E. C. Relph
PLA 1751H	Public Finance for Planners/ N. E. Slack
JPG 1804H	Space, Power and Geography: Understanding Spatiality/ S. Ruddick
JPG 1810H	Globalization and Postmodernism/ K. Goonewardena
PLA 1904H	Law and Planning/S, M. Makuch, Staff
JPG 1909H	Social Survey Methods/Staff
JPG 1914H	Spatial Information Systems/ J. Chen, D. Boyes
PLA 4444H	Internship (Credit/No Credit)/Staff Designates the internship to be undertaken by master's students in the Planning Program. It cannot be used to fulfil other course requirements for the degree.
PLA 1149H	Independent Study

Degree of Master of Urban Design Studies

The Master of Urban Design Studies (MUDS) is a one-year professional degree program intended to provide intensive, advanced education in the principles and practices of Urban Design for students who plan to pursue a career in an urban discipline. Reflecting its interdisciplinary foundations, the MUDS program emphasizes a strong social science orientation. 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.

This 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. Together, these two degree programs, in addition to the specialization in Urban Design within the Master of Science in Planning program, constitute a closely integrated suite of graduate programs in the discipline of Urban Design.

The MUDS program may be taken on a full-time or part-time basis.

Admission Requirements

Applications are encouraged from candidates with prior degrees in a range of disciplines including planning, geography, other social sciences, the design disciplines, business administration, and law. Three possible entry streams are anticipated.

1 For students with a 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.

2 For applicants with a 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.

3 Students with a 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.

Program Requirements

Students are required to take a total of eight half-course equivalents. Students entering the program with significant prior design workshop/studio experience (as determined by the admissions committee) must complete a core program of six half-course equivalents plus a further two half-courses 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 a core program of seven half-course equivalents plus a further one half-course elective. The requirements for the degree 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 the time of first registration in the program. Part-time students will be expected to participate in the same class meetings as full-time students.

Core Courses

The core program is composed of six half-course equivalents (seven 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.

The course sequence for the core program is:

First Session

- PLA 1650H/URD 1031H Urban Design: History Theory Criticism
  or
  PLA 1713H Place, Design and Landscape
- PLA 1654H Urban Design Research Methods
- JPG 1501H The Political Economy of Cities
- Plus one elective

Students without significant design workshop/studio experience must also take:

- PLA 1652H Introductory Studio in Urban Design and Planning

Second Session

- PLA 1653Y Advanced Studio in Urban Design and Planning
- PLA 1655H Urban Design and Development
- Plus one elective

Policy Analysis

Graduate faculty of the University who are Associates of the Institute

Full Members

W. M. Baker, BCom, MA, PhD, Royal Bank Chair in Public and Economic Policy
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J. L. Carr, BCom, MA, PhD
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P. C. Coyte, BA, MA, PhD
R. J. Daniels, BA, LLB, LLM
M. Faig, BA, MEc, PhD
M. K. Gunderson, BA, MA, PhD, CIBC Chair in Youth Employment
I. J. Horstmann, BA, PhD
A. J. Hosios, BEng, MA, MEng, PhD
D. E. Hyatt, BA, MA, PhD
G. V. Jump, BA, PhD
J. G. Macintosh, BSc, LLB, LLM, The Toronto Stock Exchange Chair in Capital Markets
G. F. Mathewson, BCom, PhD (Director)
T. H. McCurdy, BA, MA, PhD
A. Melino, BA, PhD
S. Moorthy, BSc, MBA, MS, PhD
P. H. Pauly, MA, PhD
J. E. Pesando, BA, MA, PhD
A. Siow BA, PhD
M. Smart, BA, MA, PhD
M. Stabile, BA, MA, PhD
W. C. Strange, BA, MA PhD
S. M. Tanny, Bsc, PhD
M. J. Trebilcock, LLB, LLM, FRSC, University Professor
D. Trefler, BA, MPh, PhD
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Members Emeriti

J. A. Sawyer, BCom, MA, PhD
T. A. Wilson, BA, AM, PhD, FRSC

Associate Members

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K. S Corts, BA, MA, PhD
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The Institute's objective is to develop and maintain a research program in economic and social policy that complements graduate studies in the social sciences, business and law. To promote research, the Institute offers office space and support to relevant faculty. The Institute may also arrange for the publication of research results of Associates.

Research projects in process in the previous academic year cover a diverse set of issues and topics. Among the issues currently under investigation at the Institute are:

1 the impact of early versus later education on intergenerational earnings persistence and income inequality and the ways that education policy can equalize economic opportunities;
2 the impact of capital market imperfections on economic development;
3 parental leave policies and their impact on male-female wage inequality;
4 the impacts that tariffs, particularly on goods produced by high skill industries, have on growth;
5 the role played by business clusters in promoting technology transfers and growth;
6 the impact of growing income inequality on economic segregation and government reliance on the not-for-profit sector;
7 healthcare policy and healthcare reform;
8 tax policy and tax policy reform;
9 the effect of collective bargaining legislation on strikes and wages;
10 what activities should the firm outsource and how should the firm do it;
11 restrictive business practices and contracting;
12 issues in competition policy;
13 financial sector regulation;
14 the role of "most favoured nations" clauses in commerical contracts pricing in retailing;
15 art as an investment;
16 theoretical foundations of the demand for money;
17 interaction between consumption and portfolio decisions.

The Institute offers office accommodation to a select number of senior graduate students working with Institute Associates. As well, the Institute occasionally employs graduate students as research assistants on a part-time basis during the academic year and on a full-time basis in the summer months.

The Institute underwrites a set of workshops and seminars on the analysis of economic strategy as applied to selected fields of economics. The Institute also sponsors short-term visits by distinguished academics from other universities. The objective of these workshops, seminars, and visits is to promote greater interaction between faculty and graduate students, between those within the University and distinguished scholars from other universities and between academics and external decision makers in both the private and public sectors. The Institute sponsored workshops include:

- Workshop in Empirical Economics
- Workshop in Industrial Organization and Business Economics
- Workshop in International Trade
- Workshop in Monetary and Macro Economics

Political Science POL

Graduate Faculty

Full Members

E. Adler, BA, MA, PhD, Andrea and Charles Bronfman Chair in Israeli Studies
S. Bashevkin, BA, MA, PhD
R. S. Beiner, BA, DPhil
A. Braun, BA, MA, PhD
A. S. Brudner, BA, MA, LLB, PhD
D. R. Cameron, MSc BA, PhD
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S. Chambers, BA, MA, MPhil, PhD (M.A. Supervisor)
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R. Deber, SB, SM, PhD
R. J. Deibert, BA, MA, PhD
M. W. Donnelly, BS, Institute Certificate, MA, PhD, David Chu Professor of Asia-Pacific Studies
D. Eyoh, BA, MA, PhD
V. C. Falkenheim, BA, MA, PhD
J. F. Fletcher, BA, MA, PhD
H. D. Forbes, BA, MA, PhD
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R. Hirschl, BA, LLB, MA, MPhil, PhD
T. F. Homer-Dixon, BA, PhD
R. Iton, BA, MA, PhD
P. Kingston, BA, MA, MPhil, DPhil
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J. Kopstein, PhD, MA, BA
L. Leduc, BA, MA, PhD
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P. McCamey, BA, MCP, PhD
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N. Nevitte, BA, MA, PhD
C. L. OtWin, AB, MA, PhD
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K. W. Roach, BA, LLB, LLM
A. Rubinoff, BA, MA, PhD
K. R. Sandbrook, BA, MA, DPhil, FRSC
D. Schneiderman, BA, LLB, LLM
D. V. Schwartz, BA, MA, PhD
P. Silcox, BA, MA, PhD
R. Sirneon, BA, MA, PhD
G. D. Skogstad, BA, MA, PhD
P. H. Solomon, BA, MA, CertRusslnst, PhD
S. Solomon, BA, MA, CertRusslnst, PhD
J. Stein, BA, MA, PhD, FRSC, University Professor, Harrowston Professor of Conflict Management and Negotiation
R. E. Stren. BA. MA. PhD
J. A. Teichman, BA, MA, PhD
J. Tully, BA, PhD
C. J. Tuohy, BA, MA, PhD
R. C. Vipond, BA, AM, MA, PhD (Chair)
L. E. Weinrib, BA, LLB, LLM
D. A. Welch, BA, AM, PhD, lgnatieff Chair (Coordinator of Graduate Studies)
G. White, BA, MA, PhD
M. S. Williams, AB, AM, PhD
N. Wiseman, BA, MA, PhD
D. A. Wolfe, BA, MA, PhD

Members Emeriti

E. G. Andrew, BA, PhD
J. Barker, AB, MA, PhD
s. H. Clarkson, BA, MA, D de Rech
R. Gregor, BA, MA, PhD
F. J. Griffiths, BA, MIA, PhD
G. Horowitz, BA, MA, PhD
A. A. Kontos, Barrister at Law, MA, PhD
R. A. Manzer, BA, BEd, BA, MA, PhD
R. O. Matthews, BA, MIA, PhD
D. Pokorny, PromFil, CSc
R. C. Pratt, BA, MPhil
A. Rotstein, BA, PhD
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C. D. Shearing, BSocSci, MA, PhD
M. H. Watkins, Bach Commerce

Associate Members

S. Bernstein, BA, MA, PhD
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L. Hooghe, Cand, Lic, Doct
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N. Kokaz, BA, BA, MA, PhD
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Application packages are available from the Department office and the Department's Web page: www.chass.utoronto.cafpolsci/information/graduate/graduate-information.htm. All applicants are required to submit a sample of their written work and a statement of intent to the Department as part of the application process. M.A. applicants must arrange for three letters of academic recommendation to be sent to the Department, and Ph.D. candidates must arrange for four letters. Details of the programs are printed in the booklet *Graduate Information Guide,* which is available from the Department of Political Science or on its Web site.

Degree of Master of Arts

Admission Requirements

The minimum admission requirement for the M.A. programs is a cumulative grade average of B+ or better in a bachelor's program equivalent to a University of Toronto four-year bachelor's degree program. Students are expected to have completed at least five to eight suitably distributed courses in political science with at least a B+ average. 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.

Students seeking entry into the M.A. programs but lacking a four-year specialist degree or the minimum required number of political science courses should consider doing qualifying work at the undergraduate level prior to application. Such work should be undertaken in consultation with the M.A. supervisor.

Program Requirements

The minimum requirement is the equivalent of four full graduate courses. 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 one full political science course with the approval of the Department. The equivalent of one full course may be taken in a cognate discipline with the approval of the Department. For students intending to proceed to a Ph.D. at the University of Toronto, there are advantages to planning the M.A. program with a view to eventually meeting Ph.D. requirements.

The departmental M.A. comprises two streams:

1 Political Theory
2 Politics and Policy

Students are admitted to one stream and may switch streams once in the program only with permission of the M.A. Supervisor.

Departmental M. A. -Political Theory Stream

This stream is intended primarily for those students who wish to concentrate their studies in the theory area. Students in this stream will normally take three full courses in the Political Theory subfield. They are also required to take at least one full course in an area other than Political Theory. All courses in this program should be chosen in consultation with the M.A. Supervisor.

Departmental M.A.-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 taken must include at least one half-course in Political Theory, which can be either the half-course offered by the Department specifically for this purpose (POL 2040H) or any other theory course. Also required is at least one half-course 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 M.A. Supervisor.

Specialist Program in Political Economy of Development

Students who enter this program must have a satisfactory background in political science and undergraduate prerequisites in microeconomics, macroeconomics, and statistics. Note that 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.

In this program all students are required to take JPE 2408Y *Political Economy of International Development.* In addition, students must

complete the equivalent of one graduate half-course in Economics, normally ECO 2700H *Economic Development I,* 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.

Specialist Program in Public Policy and Global Economy—Transatlantic Masters Program
The program is under review. Contact the Department for further information.

Degree of Doctor of Philosophy

Admission Requirements
Admission to the Ph.D. program is offered only to excellent students who have either completed an M.A. degree in political science (or its equivalent) by the time of enrolment or have completed the equivalent of a four-year B.A. with a concentration in political science by the time of enrolment. Only exceptional students will be admitted directly to the Ph.D. program from the B.A. Applicants from both levels are expected to have achieved grades averaging A- or better in their most recent degree. Applicants from the B.A. level will apply to the M.A. program but indicate on the M.A. application form that they wish to be considered for direct entry to the Ph.D. program.

Program Requirements
1 Course requirements
The Department offers graduate courses in the following five core fields:
Political Theory
Canadian Government and Politics
International Relations
Comparative Government—Developing Societies
Comparative Government—Industrial Societies

Many of the principal teaching and research interests of the Department's faculty focus on areas which cut across the conventional core fields. These are designated as areas of specialization which provide an alternative way of structuring the graduate program. Currently the following areas of specialization are offered:
Public Policy (PP)
Political Economy (PEC)
Public Law and Federalism (PLF)
Political Behaviour and Democratic Politics (PBW
Women, Gender, and Politics (WGP)

Students who enter the Ph.D. program from a B.A. should aim to complete their work within six years. They will take a total of six full graduate courses. Students will need to attain at least an A- average in their first four courses in order to continue in the Ph.D. program. In selecting their courses, students should ensure that they satisfy the field and/or area requirements as described below for those entering the Ph.D. program with an M.A.

Students who enter the Ph.D. program from an M.A. should aim to complete their work within five years. They will take between two and five full courses, depending on their relevant background in the major and minor field or area they choose to pursue. All Ph.D. students are required to have at least one graduate half-course in political theory. All Ph.D. students in majors other than Political Theory are also required to complete one half-course in research design. Graduate courses taken at the M.A. 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 M.A. will take the equivalent of three full courses to satisfy program requirements; all Ph.D. students must take a minimum of two full courses with the Department after entering the Ph.D. program.

Ph.D. students have the option of organizing their course work in one of two ways:
a A *major core field and a minor core field*
Students who choose this option must fulfil the core course requirement (1.0 FCE) plus the equivalent of one other full-year course in the major field, and the core course plus the equivalent of one other full-year course in their minor field.
b A *major core field and an area of specialization*
Students who choose this option must fulfil the core course requirement (1.0 FCE) plus the equivalent of one other full-year course in their major field and the equivalent of two full-year courses in their area of specialization, at least one of which must be outside the major field.

2 Major field examination
By the end of the second year of the program, all Ph.D. students will be expected to have taken a written 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.

The major field examination should be taken in May or August of the year in which the core course is taken as long as all assignments in the core course have been completed. The examination must be taken no later than the second year of the Ph.D. program. A student who fails to achieve a grade of at least A- is permitted one opportunity to rewrite the examination. If, after failing the examination once, the major field is changed, the student is permitted two attempts to pass the examination in the new field.

3 Thesis proposal, thesis committee, and thesis schedule

Students should assign a high priority to defining a thesis topic and choosing a thesis committee. Those entering the Ph.D. program from an M.A. must identify a working thesis topic and the name of a supervisor by October 15 of their second year. Those entering the program from a B.A. must do so by October 15 of their third year. By the beginning of the third year (fourth for direct entry candidates) students must (a) have established a thesis committee of three faculty members including a thesis supervisor, and (b) have completed a thesis proposal of approximately 25 pages for submission to the thesis committee.

The research and writing of the thesis will follow the acceptance of the thesis proposal. The work schedule should permit the student to complete his or her thesis by the end of the fifth year (in the case of those admitted from an M.A.) or the sixth year (in the case of those admitted from a B.A.).

4 Language requirement

To satisfy the 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. This requirement is to be met by the end of the third year of study.

5 Residency requirements

Those entering the program from an M.A. must spend a minimum of three sessions in residence. Those entering from a B.A. must spend a minimum of six sessions in residence.

6 Transfer between the M.A. and Ph. D. programs

Students admitted to the Ph.D. from a B.A. (or equivalent degree) who receive less than an A- average in their first four courses will be recommended to SGS for transfer to the M.A. program. If the transfer is approved, these students will graduate with a terminal M.A., provided their grades meet the requirements for the M.A. degree.

In exceptional cases, on the initiative of the Director of Graduate Studies, students may be transferred from the M.A. to the Ph.D. program. Such transfers will occur only where a full assessment of a candidate's B.A. record (or equivalent) was impossible and where that candidate's instructors concur that the student in question has excelled in the first half of the M.A. program.

Collaborative Programs

For more information about each of the following collaborative programs, consult the respective entries in this calendar.

Asia-Pacific Studies Collaborative Program

The Department of Political Science participates in the Collaborative M.A. Program in Asia-Pacific Studies. This program provides graduates with advanced training in traditional disciplines as well as interdisciplinary expertise in modern East and Southeast Asia. The major topical areas of study include political economy, modern and contemporary social history, international relations, gender and the family, political and social change, economic development, and cultural studies.

Environmental Studies Collaborative Program

The Department of Political Science, in conjunction with the Institute for Environmental Studies (IES) and other departments, offers a collaborative master's program in Environmental Studies. Students in the program take two core half-courses offered by the Institute, one specialized IES half-course, and the equivalent of 2.5 graduate courses in Political Science. An internship, culminating in a research essay, is also required.

The Department also participates in the Collaborative Ph.D. program. Ph.D. candidates must write a thesis on an environmental topic and must complete two core half-courses, IES 1001H and IES 1002H, unless these were completed in the Collaborative M.A. program, in which case two other half-courses are required.

Ethnic and Pluralism Studies Collaborative Program

Together with a number of other departments, the Department of Political Science participates in the Collaborative Program in Ethnic and Pluralism Studies leading to an M.A. or a Ph.D. Master's students must take two half-courses in ethnicity from two different disciplines, the coordinating seminar in ethnicity (JTH 3000H) and,

if a thesis is written, it should be in an ethnic studies area.

Doctoral students must take four half-courses, including the courses taken for the master's degree, at least two of which must be outside the home department. A coordinating seminar in ethnicity (JTH 3000H) is also required, except for students who have completed it at the master's level. The Ph.D. thesis will focus on ethnicity.

International Relations Collaborative Program

The Department participates in the Collaborative M. A. Program in International Relations. Admission to this program is restricted and highly competitive. Application is made to the home department through the normal procedures. In addition, a statement of interest, curriculum vitae, and copies of transcripts should be sent to the Director, International Relations Collaborative Program.

Jewish Studies Collaborative Program

The Department participates in the Collaborative Ph.D. Program in Jewish Studies. Students must complete a core half-course in research topics and methods in Jewish Studies, two half-courses (one within and one outside Political Science), and complete a dissertation that deals substantively with topics in Jewish Studies.

South Asian Studies Collaborative Program

The Department participates in the Collaborative M.A./Ph.D. program in South Asian Studies. Students must take the core course Issues in South Asian Studies, attend the visiting lecture series, and write a thesis which includes a significant South Asian component; for M.A. students the thesis is optional. Doctoral students may be required to acquire proficiency in a South Asian language.

Women's Studies Collaborative Program

Together with other departments, the Department of Political Science participates in the Women's Studies Collaborative Program leading to an M.A. or a Ph.D. Students in this program must complete regular degree requirements and pursue a program of study acceptable to both the Department and the Women's Studies Collaborative Program. Upon successful completion of the requirements, students will receive a degree with the notation "Completed Collaborative Program in Women's Studies" on their transcript.

Combined Programs

Combined Juris Doctor/Master of Arts, Law and Political Science (specialization in International Relations)

The Department participates in two programs with the faculty of Law, allowing students to obtain an M.A.I.R. or a Ph.D. in addition to a J.D. The combined J.D./M.A. in International Relations is available to students whose M.A. home base is Political Science and allows for the completion of both degrees in three years (rather than the four that the separate degrees would take). Students must be admitted to both the Faculty of Law and the M.A.I.R. program.

Combined Juris Doctor/Doctor of Philosophy

The J.D./Ph.D. (Political Science) program enables students to complete both degrees in at least one year less time than it would take for the separate degrees. Students must be admitted to the Ph.D. program in Political Science and the Faculty of Law, through separate application processes. Students would complete the first year of law in the Combined Program and then would complete a year in Political Science before returning for two more years in Law. They would then complete the requirements of the Ph.D. Program, including a thesis.

Courses of Instruction

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)/Staff*

POL 2001Y Problems of Political Community/ J. H. Carens

POL 2004Y Marxism/R. B. Day

POL 2006Y Studies in Modern Political Theory/Staff

POL 2007Y Twentieth-Century Political Thought/A. A. Kontos

POL 2008Y The Political Theory of G. W. F. Hegel/A. Brudner

POL 2010H Democratic Theory/Staff

POL 2011H Problems in Political Thought of the Socratic School/Staff
POL 2014Y The Problem of Natural Right/ Staff
POL 2019Y The Political Philosophy of Political Economy/R. B. Day
POL 2021Y Comparative Studies in Jewish and Non-Jewish Political Thought/C. Orwin
POL 2022Y Modes of Political Inquiry/ H. D. Forbes
POL 2024Y Feminist Theory: Challenges to Legal and Political Thought/ J. Nedelsky
POL 2025Y Enlightenment and Its Critics/T. L. Pangle
POL 2026H Topics in Political Thought I/Staff
POL 2027H Topics in Political Thought II/Staff
JPJ 2028H Constitutional Theory/A. Brudner
JPD 2029H Sociological Theory II/Staff
POL 2030Y Democratic Citizenship/ G. Horowitz
JPJ 2032Y Citizenship Theory and Immigration Law
POL 2032H Judgement in Law and Politics/ J. Nedelsky
JPJ 2036Y Comparative Constitutionalism: Rights and Judicial Review/ Staff
POL 2036Y Reason, Deliberation and the Public Sphere/S. Chambers
POL 2037H Law, Religion and Public Discourse/J. Nedelsky, R. Hutchinson
JPD 2037Y Post-Modern and Contemporary Thought/D. Cook
POL 2038H Pluralism, Justice and Equality/ M. S. Williams
POL 2040H Horizons of Political Reflection/ R. Beiner

Canadian Government and Politics

POL 2100H Government of Canada (core course)/Staff
POL 2700H Comparative Politics (core course)/Staff

POL 2101Y Politics and the Media/Staff
POL 2102H Topics in Canadian Politics I/ G. White
POL 2103H Topics in Canadian Politics II/Staff
POL 2107H Local Government in Canada/ Staff
POL 2110H The Politics of Public Sector Budgeting/C. McFadyen
JPJ 2116H Constitutional Politics/Staff
JPJ 2020H Law and Public Policy//R. Simeon
POL 2125H Experiencing Public Policy-Making/Staff
POL 2127H Canadian Theories of Multiculturalism/H D. Forbes
POL 2139H The Canadian Welfare State in Comparative Perspective/ R. Haddow
JPJ 2220H Public Law, Social Regulation and Poverty/L. Sossin
HAD 5010H Canada's Health System and Health Policy/R. Deber
HAD 5765H Case Studies in Health Policy/ R. Deber

International Relations

POL 2200Y International Politics (core course)/Staff

JPJ 2035H International Taxation
JPJ 2037H International Trade Regulation
JPJ 2038H Law, the Individual and the Community: A Cross-Cultural Dialogue
JPJ 2039H European Community Law
JPJ 2041H International Criminal Law
JPJ 2042H Labour Policy
JPJ 2043H Self-Determination
JPJ 2044H First Nations and the Constitution/ P. Macklem
JPJ 2045H Institutionalizing Doubt: Modernity and the Challenge to Traditional Legal Traditions
JPJ 2046H Law, Institutions and Development
JPJ 2047H Comparative Constitutional Law
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 2201Y International Political Economy/ L. W. Pauly
POL 2205H Topics in International Politics I/ Staff
POL 2206H Topics in International Politics II/ Staff
POL 2207H Topics in International Politics III/ Staff
POL 2216Y The Military Instrument of Foreign Policy/A. Braun
POL 2217Y Politics of the International System/A. Rubinoff
POL 2218H Political Economy of International Trade/ C. Norrlof
POL 2225Y Environmental Change/T Homer-Dixon
POL 2226H Ethics and International Relations/N. Kokaz
JUP 2227Y Contemporary Issues in Peace and Conflict

POL 2228H The Dynamics of the Global Trade System/S. Clarkson
POL 2229H The G8 and Global Governance I/ J. Kirton
JBP 2230H Topics in International Politics/ B. Fischer, F. McKenzie
POL 2230H The G8 and Global Governance II/ J. Kirton
JHP 2231H The History and Philosophy of International Relations Thought/ J. Graff, W Wark, D. Welch
JPD 2232H International Governance/ H. Friedmann, J, Kirton
POL 2233H Conflict and Conflict Management/B. Fischer, A. Alexandroff

Comparative Government
(Industrial Societies)
POL 2300H Comparative Politics of Industrial Societies (core course)/Staff
POL 2700H Comparative Politics (core course)lStaff

JPV 1201H Politics, Bureaucracy, and the Environment/R.E. Stren
JHP 1289Y Twentieth-Century Ukraine/ P. Magosci
JPJ 2036Y Comparative Constitutionalism: Rights and Judicial Review/Staff
JPJ 2116H Constitutional Politics/Staff
POL 2139H The Canadian Welfare State in Comparative Perspective/ R. Haddow
JPJ 2221H Advanced Constitutional Law/ K. Roach
POL 2302Y Topics in U.S. Government and Politics/R. Iton
POL 2304H Soviet and Post-Soviet Politics (exclusion to POL 2324H)/D. V Schwartz, P.H. Solomon
POL 2307H The Political Economy of Technology: From the Auto-Industrial to the Information Age/Staff
POL 2308Y Politics and Governments of Eastern EuropelA. Braun
POL 2313Y Comparative Political Parties and Elections/L. LeDuc
POL 2314H Political Economy of Asia Pacific/ M. Donnelly
POL 2316H Women and Politics/S. Bashevkin
POL 2317H Politics and Policy Analysis/ R. Manzer
POL 2318H Comparative Public Policies: Selected Areas/G. Skogstad
POL 2321H Topics in Comparative Politics I
POL 2322H Topics in Comparative Politics II
POL 2323Y Multilevel Politics: The European Union in Comparative Perspective/L. Hooghe
POL 2324H Ethnonationalism and State-Building: The Communist and Post-Communist Experience (exclusion to POL 2304Y)/ D. Schwartz
POL 2325Y The Politics of Post-Communism/ J. Kopstein
POL 2340H NATO and EU Enlargement: Ukraine and the Post-Communist World/T: Kuzio
POL 2341H Nationalism, Myths and Identity: Ukraine and the CES/IT: Kuzio
JPJ 2394H Innovation and Knowledge Transfer in Regional Industry Clusters/ D. Wolfe
POL 2429Y Nationalism, Ethnic Conflict, and Democracy/J. Bertrand

Comparative Government
(Developing Societies)
POL 2400H Theories and issues: The Politics of Development (core course)/ Staff
POL 2700H Comparative Politics (core course)/Staff

POL 2208Y Third World Politics in International Affairs/Staff
POL 2218H The International Political Economy of Trade/C. Norrlof
POL 2403H Topics in African Politics I/ J. Barker
POL 2404H Topics in African Politics II/ D. L. Eyoh
POL 2405H Topics in Latin American Politics/ Staff
JPE 2408Y Political Economy of International Development/R. Sandbrook, G. lndart
POL 2409Y Politics and Planning in Third World Cities/P.L. McCarney
POL 2411H Topics in Asian Politics
POL 2413H Politics in Southeast Asia/ J. Bertrand
JPE 2415Y Research Essay in the Political Economy of Development/Staff
POL 2416Y Politics and Society in Contemporary China/V: C. Falkenheim
POL 2418H Topics in Middle East Politics/ P.W.T. Kingston
POL 2423H Post-Colonialism/W Mwangi
POL 2429Y Nationalism, Ethnic Conflict, and Democracy/J. Bertrand
JPF 2430Y Cities/P.L McCarnex Staff

Miscellaneous

POL 2501Y	Research Methods and Design/ L. LeDuc
POL 2502Y	Quantitative Methods and Data Analysis/J. E Fletcher
POL 2503H	Thinking Through Research Design/N. Nevitte
POL 2504H	Statistics for Political Scientists/ H. D. Forbes
POL 2810Y	M.A. Research Seminar I/Staff
POL 2811Y	M.A. Research Seminar II/Staff
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

Proteomics and Bioinformatics (Collaborative Program)

Program Committee

B. Steipe, MD, PhD/Biochemistry (Director)
D. S. Guttman, BS, PhD/Botany
N. Provart, BSc, MSc, PhD/Botany
S. D. Der, BSc, PhD/Laboratory Medicine & Pathobiology
G. Prive, BSc, PhD/Medical Biophysics
Y. P. Pei, MD, MSc, FRCP(C) Medical Science
A. R. Davidson, BSc, PhD/Molecular & Medical Genetics
B. Chang, BA, PhD, Canada Research Chair/Zoology

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Nature of the Collaborative Program

The graduate departments of Biochemistry, Botany, Laboratory Medicine and Pathobiology, Medical Biophysics, Medical Science, Molecular and Medical Genetics, and Zoology participate in the Collaborative Program in Proteomics and Bioinformatics. Candidates 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 is a Ph.D. program; students must be registered in the doctoral program of one of the host departments and must be undertaking research with a significant proteomics and/or bioinformatics component under the supervision of a member of the Program. Upon successful completion of the Ph.D. requirements of the host department and the Program, students receive the notation "Completed Program in Proteomics and Bioinformatics" on their transcript.

Program Requirements

Students must:

1 complete a Ph.D. thesis and any core courses as required by their host department.

2 complete the interdepartmental courses JTB 2010H and JTB 2020H. These courses may be taken in place of some host department courses after a student obtains written permission from the host department. Prospective students should contact the Director for more details on admission procedures and course requirements.

3 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.

Courses of Instruction

The following courses are offered by the program every year.

JTB 2010H Proteomics and Functional Genomics
JTB 2020H Applied Bioinformatics

Psychology PSY

Graduate Faculty

Full Members

R. S. Abramovitch, BA, MA, PhD
C. Alain, BA, MA, PhD
T. M. Alloway, BA, MA, PhD
A. K. Anderson, BA, PhD, Canada Research Chair
N. D. Anderson, BA, MA, PhD, CPsych
J. W. Astington, BA, BSc, MA, PhD
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C. M. Cotter, BA, PhD
G. S. Cree, BA, MA PHD
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M. Daneman, BA MA, PhD
E. De Rosa, BA, PhD
M. Dennis, BA, MA, PhD
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S. Erb, BSc, MA, PhD
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A. S. Fleming, BS, PhD
P. Fletcher, BSc, DPhil
M. Fournier, BA, PHD
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D. Goldstein, BA, MA, PhD
C. L. Grady, BA, MA, PhD
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P. Zelazo, PhD, Canada Research Chair
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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.

Students are admitted under the general regulations of the School of Graduate Studies. Successful candidates normally have at least an A- average (or first-class standing) in their last two undergraduate years, and the equivalent of six full courses in psychology including statistics and some laboratory experience. Other conditions for admission are outlined in a separate booklet, *Graduate Studies in Psychology* available from the Coordinator of Graduate Studies. It is assumed that all students entering the master's program intend to continue into the Ph.D. program.

Degree of Master of Arts

The M.A. program in Psychology requires one academic year of graduate study. The program of study includes courses and individual research training leading to a thesis.

In the M.A. year, students must complete the following five half-course equivalents:

1 PSY 1000H *Directed Studies* to prepare for the M.A. thesis research
2 PSY 2001H Design of Experiments I, experimental design and statistics
3 three half-courses
4 M.A. thesis

It is expected that after the M.A. year, students will proceed to the Ph.D. program. To be eligible for admission, adequate research performance and at least an A- average are normally required.

Degree of Doctor of Philosophy

The Ph.D. program in Psychology requires a 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.

It is expected that after the M.A. year, students will proceed to the Ph.D. program. To be eligible for admission, adequate research performance and at least an A- average are normally required.

All students must complete the following:

1 PSY 3000H Research Project in Psychology - usually taken in Ph.D. 1. This is a research project course supervised by a faculty member other than the student's Ph.D. supervisor. It is a one-session course spread over Ph.D. 1.
2 PSY 3001H Professional Psychology - usually taken in Ph.D. 1.
3 An advanced statistics course chosen from a list provided by the Department.
4 Four half-courses.
5 Breadth requirement - during the M.A. and Ph.D. combined, two half-courses in two different areas not in the student's major area, each course requiring a major paper. Courses taken to fulfil the breadth requirement may be included in the four half-course requirement.
6 Thesis proposal and oral exam PSY 4000H. This is a one-session course spread over the full year leading to a formal proposal for doctoral research and requiring an examination in the student's area of specialization.
7 Ph.D. 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 Ph.D. program. Students admitted with an M.A. from another university will normally be required to take PSY 2001H Design of Experiments I, in addition to the other Ph.D. requirements; however, exemptions may be granted by the graduate director of the Department of Psychology.

Collaborative Programs
The Department participates in the following collaborative programs:
1 Addiction Studies
2 Aging and the Life Course
3 Developmental Science
4 Neuroscience
For more details, consult the separate entries in this calendar.

Courses of Instruction
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

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

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

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

SocialPersonality/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)
PYS 3002H Teaching Practicum (Credit/No Credit)
PSY 4000H° Specialization Study (Credit/No Credit)

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/P A. Reich
JNS 11000Y	Fundamentals of Neuroscience: Systems and Behaviour/Staff
JNS 1001H	Neuroanatomy of Mind/ J. A. Saint-Cyr
JPX 1001Y	Parenting: Multidisciplinary Perspectives/C. Corter (coordinator)
JPM 1005Y	Behavioural Pharmacology/ E. M. Sellers
ZOO 2215Y	Insect Behaviour/G. K. *Morris,* T.M. Alloway

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

Public Health Sciences CHL

Graduate Faculty

Full Members

S. M. Abet, BSc, MA, PhD
K. R. Allison, BSc, BPHE, MASc, MSc, PhD
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B. Rush, PhD
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(Chair)
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G. R. Wright, BASc, MASc, PhD
K. Young, BSc,MD,MSc,PhD,FRCPC,LMCC

Members Emeriti

M. J. Ashley, MSc MD, DPH
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D. Hewitt, MA, DipStat
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Associate Members

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E. Goldberg, BA, MD, FRCPC

P. J. Goodwin, MSc, MD, FRCP(C), The Marvelle Koffler Chair in Breast Research
D. J. Gorman, BSc, PhD, DIH
J. Gould, MA, PhD
I. Granic, MA,PhD
G. Granville, Bsc
G. W. Gray, PhD
R. E. Gray, BA, MA, PhD
G. Greenwood, PhD
M. G. Guerriere, MD, MM
A. Hanley, MSc,PhD
B. J. Harvey, BA, MD, MSc, FRCP(C), FACPM, PhD
J. Heller, BASc, MASc, PhD, DECH
F. J. Hendriks, BSA
B. J. Henry, BSC,M.D.
L. Hershfield, Ph.D
C. R. Hetherington, BSc, MA, PhD
E. J. Holowaty, MD, MSc, FRCP(C)
G. S. Holzapfel, limited term GS membership
H. R. Hosein, BSc MSc, PhD
R. A. House, BSc, MSc, MD, FRCP(C)
S. Hwang, MD, MPH, FRCP(C)
S. Ibrahim, BSc,MSc
M. J. Irvine, BA, MPhil, PhD
M. Jackson, Ph.D.
S. Jackson, BSc, MSc, PhD
S. B. Jaglal, BSc, MSc, PhD
M. James-McNeil, MD
P. Jha, DPhil, MD
I. L. Johnson, BSc, MD, MSc, FRCP(C)
M. M. Kahan, MD, MHSC
A. S. Kaiser, BA
G. Kalabis, BSc, PhD
J. Katz, PhD
s. Katz, BA, MA, PhD
P. Kaufman, MA,PhD
S. Keller-Olaman, PhD
M. Kerr, BSc, MSc, PhD
A. Khenti, MA
L. Kiefer, BA, MD, MHSc
J. Knight, PhD
M. Koo, BSc,MSc,PhD
M. D. Krahn, BA, MSc, MD, FRCP(C)
R. Kustra, PhD
R. Labonte, BA, MM, MA
J. V. Lavery, BA, BSc,MSc,PhD
S. Leatherdale
H. Lee-Han, BSC, MSc PhD
K. J. Leonard, BComm, MBA, PhD
N. E. Lightfoot, BSC, MSc, PhD
G. L. Liss, MD
M. Locke, BA, BSc, PhD
E. MacEachen, MSc,PhD
M. MacNeill, BPHe, MA, PhD
W. Magee, BA, MS, PhD
V. Mai, MD, MHSc, FRCP(C)
L. M. Mainwaring, BA, BHK, MHK, PhD, CPsych
R. Malik, MD, MHSc
D. Manuel, MD,MHSc
D. Martin, BA,MA
D. K. Martin, BSC, PhD
R. Mason, BA,MA,MsED,PhD
J. McGeer, BSc, MSc, MD, FRCP(C)
J. McGuire, Bsc, MHSc
W. E. Mcllroy, BSc, MSc, PhD
P. D. McKeever, BN, MSc(A), PhD
J. Mcneill, BSc, MEng
M. McQuigge, BSC,MD,FCFP,MPH
R. G. Mcquillan, BASc, MASc
G. McVey, BA,MA,PhD
H. R. Meier, MB, ChB, MSc, FRCPsych, FRCPC
D. Midmer, BSN, MEd, RN
T. L. Mitchell, MEd, PhD
R. Moineddin, PhD
K. Moran, MHSc, BSPT, BSc
M. A. Murray, BA, MA, PhD
L. J. Muzzin, BA, MA, MA, PhD
I. Naglie, BSc, MDCM, FRCP(C), ABM
C. Nathanson
L. Nolan, MHSc, MD
E. Nowgesic, BScN,MHSc
M. Ofner, BScN,MHSc
J. Orbinski, MA, MSc,MD
T. Panzarella, BSc MSc
A. D. Paterson, BS, MBChB
J. Payne, BSc MSc PhD
E. H. Peter-Hardtke, MsN,PhD
W. Pickett, BSc,MSc,PhD
M. POlanyi, BSc,MA,PhD
V. Poon, BSc, MD, MTS, DMin, PsyD
E. Power, BA, BSc, MSc, PhD
K. I. Pritchard, BA, MD
G. Pron, Bsc, MSc, PhD
B. G. Pronger, BA, MSc, PhD
J. Raboud, BMath,MSc,PhD
E. Rea, MD
G. Reid, BA, MA, PhD
D. M. Riley, BA, MA, PhD
P. Ritvo, BA, MA, PhD
P. Rochon, MD, MPH, FRCP(C)
C. D. Rodgers, BPE, MHK, PhD
R. Room, BA, MA, PhD
Y. Roth, MD
K. Rouleau
C. Sawka, BMSc, MD
R. Schwartz, DipEd, BSW, MSW
F. Scott, BSc, MSc, MD, LMCC, CCFP, FRCPC
J. Scott, Ph.D.
P. L. Selby
M. Shain. BA.DIPCrim.MA.SJD

R. Sibbald
J. Singh, BA, LLB,LLM,PhD, MHSc
L. F. Smith, MD
T. C. Smith, BSc, MSc
A. B. Steingart, BSc, MD, FRCP(C)
A. Steinhart, BA, MD, FRCP(C), MSc
D. Stephens, BSc,MSc
T. Stephens, BA, PhD
T. Sullivan, BSc, MA, PhD
W. F. Sullivan, BSc, MD, BA, MA, PhD
L. Sun, BSc,PhD
H. Sykes, B.Sc, P.G.C.E., MEd., Ph.D
N. Taback, MSc, PhD
Y. R. Talbot, MD
K. Thorpe
H. Thorsteinsdottir, PhD
M. C. Tierney, BA, MA, PhD
E. Tompa, BA,MA,PhD Economics
J. Turley
R. E. G. Upshur, MA, MD, MSc, FRCP(C)
P. Villeneuve, BM,Ms,PhD
V. Virji, MSC,SCD
J. Walker, PhD
W. J. Watson
I. Weller, BA, MSc PhD
P. White, BSc,MA,MBA,CPE
T. Wong, BSc,MD CM
Q. Yi, MSc
K. K. Yoshida, BPhE, BSc(PT), MSc, PhD
L. Yuan, MSc, DHA, MD, FRCP(C)
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Candidates are admitted to the multidisciplinary field of public health under the general regulations of the School of Graduate Studies. Applicants are strongly advised to have some background in statistics and quantitative methods, as well as in a social science discipline. In addition, field and employment experience are taken into consideration, especially for the M.H.Sc. program. More specific program details, requirements, course descriptions, and a supplementary application are available from the Graduate Department of Public Health Sciences. A complete description of all programs, degree requirements, courses, faculty research interests, and policies is available on the departmental Web site www.phs.utoronto.ca. Applications should be submitted by February 1

Degree of Master of Health Science

The M.H.Sc. degree program in Public Health is undertaken by students interested in professional and/or research careers in the community, academic, public or private sectors. Students may specialize in one of five areas:

1 Community Health and Epidemiology
2 Community Nutrition
3 Family Medicine
4 Health Promotion
5 Occupational and Environmental Health

All students in the M.H.Sc. program will learn the basic theoretical and methodological approaches used in community health, will share a common understanding of the field, will be able to pursue areas of specific personal interest, and will acquire some field and research experience (practicum) in their chosen area. Course sequences have been planned to include a set of common core courses, to introduce basic theory and methods early, to allow as much elective time as possible, and to permit the application of theory to practice in a field or research setting. A thesis is not required, but students may be required to undertake major papers and independent projects.

The M.H.Sc. training in Public Health Sciences aims to:

1 provide students with access to appropriate knowledge and skills from which to form the basis of ethical competence in public health generally and in their discipline;
2 promote students' use of the conceptual and practical tools/methods needed to understand developments in public health and in their discipline;
3 provide a framework of evaluative skills which can be used to apply independent scientific judgement;
4 provide a foundation for a career in Public Health research or practice; and,
5 provide entry preparation for doctoral studies in public health sciences.

Program Requirements

1 An approved program of study includes the equivalent of 10 full courses, of which 0.5 course equivalent is a core subject and at least 1.0 course equivalent is a field practicum.
2 If registered on a full-time basis in the program and, with the exception of the session in which a practicum is undertaken, a student should take two to three full-course equivalents in any one session.
3 Depending on the area of specialization, full-time students require between 16 and 22 months to complete an M.H.Sc. program, including time spent in appropriate field settings.
4 Specific program requirements and course sequences and options vary by area of specialization and are fully explained on the Web site.
5 A part-time study option is available which allows six years for completion of the program. Contact the Graduate Department of Public Health Sciences for further information.

Degree of Master of Science

The M.Sc. degree program is undertaken by students interested in research and academic careers in public health sciences. Students may specialize in one of the following areas or fields:

1 Biostatistics
2 Epidemiology*
3 Health and Behavioral Science*
4 Occupational and Environmental Health*
5 Social Science and Health* (formerly Behavioural Science)

* ***Curriculum under revision, no new admission since 2004-2005. Students interested in these areas should apply to the comparable M.H.Sc. program which has been modified to increase the research emphasis.***

Program Requirements

1 Completion of all degree requirements within five years.
2 The writing of a thesis under the supervision of a thesis committee (supervisor and at least one additional faculty member) and its defence before an examination committee appointed by the Graduate Department of Public Health Sciences.

A course-only option is available in Biostatistics.

3 The course load varies by specialization and the student's knowledge of the area of specialization and is fully explained on the Web site.
4 A part-time M.Sc. program is available. Submission of an approved program plan, with annual updates, is required.

Degree of Doctor of Philosophy

The Ph.D. degree program is undertaken by students interested in research and academic careers in community health. The specializations offered include:

1 Biostatistics
2 Epidemiology
3 Social Science and Health (formerly Behavioural Science)

Admission Requirements

Candidates are admitted under the general regulations of the School of Graduate Studies, and must provide evidence of facility in the English language. Applicants to the Ph.D. program normally are expected to have a master's degree in Public Health Sciences, or a related field from a recognized university, with a minimum A- standing. Candidates must demonstrate educational and/or professional experience that indicates a capacity to undertake research-oriented doctoral studies. They must provide satisfactory references pertaining to their academic and research abilities. In addition, applicants are expected to have the appropriate background preparation specific to the area or field of interest. (Consult the Web site for details.)

In exceptional circumstances, applicants would qualify for direct entry into the doctoral program with a bachelor's or equivalent degree and subject to review and approval by the appropriate Public Health Sciences committees.

Program Requirements for Full-Time Ph.D.

Each specialization has specific requirements in addition to the common features fisted below:

1 Full-time registration (winter and summer sessions) for the first four years of the doctoral program.
2 Completion of all degree requirements within six years from first registration in the program. Thereafter, candidates may apply for a maximum of two extensions.
3 The course requirements vary by specialization and are related to the student's knowledge of the field. Consult the Web site.
4 The writing of a comprehensive examination in the major area of specialization.
5 The designation of a minor area of specialization, depending on sub-specialization.
6 The successful completion of formal examinations and other assessments at specified points within the program to ensure continuation in the program.
7 Satisfactory evidence of proficiency in statistics or research methods or the inclusion of at least one such course in the program.

8 The writing of a Ph.D. thesis under the supervision of an approved thesis committee (supervisor plus two additional faculty members).
9 The oral defence of the thesis before an examination committee appointed by the School of Graduate Studies.

Program Requirements for Flexible-Time Ph.D.

With the approval of the graduate chair, some applicants may be admitted to a flexible-time Ph.D. program. This program will benefit mature students with career and/or familial obligations. The degree requirements for the flexible-time program are identical to those listed above for the full-time Ph.D. program; however, students have up to eight years to complete the program. They are required to register full-time for the first four years of their 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.

Collaborative Programs

Students in the M.H.Sc., M.Sc., and Ph.D. programs in the Graduate Department of Public Health Sciences may also participate in a range of collaborative programs. For more details see the separate listings in this calendar:

1 Addiction Studies
2 Aging and the Life Course
3 Bioethics
4 Cardiovascular Sciences
5 Community Development
6 Environment and Health (see Environmental Studies)
7 Health Care, Technology and Place
8 Health Services and Policy Research
9 Women's Studies

Courses of Instruction

Not all courses are offered each year. Please check the timetable on the Web site www.phs.utoronto.ca for current course offerings.

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 Survey Methods in Health Sciences I
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 Statistical Analysis of Qualitative Data
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
CHL 5250H Special Topics in Biostatistics
CHL 5251H Survival Analysis II

Community Nutrition

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 in Epidemiology
CHL 5405H Assessment of Community Health Needs
CHL 5406H Prospective Studies and Survival Analysis

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

CHL 5407H Categorical Data Analysis for Epidemiologic Studies
CHL 5408H Laboratory in Epidemiologic Protocol Design
CHL 5409H Cancer Epidemiology
CHL 5410H Occupational Epidemiology
CHL 5411H International Health
CHL 5412H Field Investigation of Health Problems
CHL 5413H Public Health Sanitation
CHL 5414H Additional Topics in Epidemiology of Non-Communicable Diseases
CHL 5415H Epidemiology of Communicable Diseases
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 5450H Special Topics in Epidemiology

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 Theories
CHL 5608H Teaching and Learning by the Health Professions: Practical Issues and Approaches
CHL 5609H Continuing Education in the Health Professions
CHL 5610H Theory and Practice of Behaviour Change in Health Professional Settings

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 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 5950H Special Topics in Occupational and Environmental Health

Social Science and Health

AGE 2000H Social Determinants of Aging and Health
AGE 3000H Advanced Research Seminar in Aging and the Life Course
CHL 5101H Social Theory of 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 Topics in Qualitative Research Methods
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 (CR/NCR)
CHL 5150H Social Science Research

Practica and Related Courses

CHL 5620Y° Medical Educator Practicum in Family Community Medicine (Credit/No Credit)
CHL 5621H+ Extension to Medical Educator Practicum in Family and Community Medicine (Credit/No Credit)
CHL 6010Y+ Required M.H.Sc. Practicum (Credit/No Credit)
CHL 6011H+ Required Practicum Extension (Credit/No Credit)
CHL 6020Y+ Optional M.H.Sc. 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

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
AGE 3000H Advanced Research Seminar in Aging and the Life Course

°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.

Rehabilitation Science REH

Graduate Faculty

Full Members

E. M. Badley, BSc, MSc, DPhil, PhD
K. Berg
S. E. Black, BSc, MD
K. A. Boschen, BA, MA, PhD
D. Brooks, BSc(PT), MSc, PhD
A. Carswell, Dip(OT), BSc, MSc,PhD
T. Chau, BASc, MASc, PhD
A. Colantonio, BA, BSc, MHSc, PhD
C. Cott, Dip(PT), BPT, DipGer, MSc, PhD
A. M. Davis, BSc(PT), MSc, PhD
G. R. Fernie, BSc, PhD, PEng, CCE
J. W. Frank, BSc, MD, CCFP, MSc, FRCP(C)
S. B. Jaglal, BSc, MSc, PhD
B. Kirsh, BSc (OT), MEd, PhD
C. MacArthur
W. E. Mcllroy, BSc, MSc, PhD
A. Mihailidis, BASc, MASc, PhD, PEng
M. Milner, BSc PhD
C. Mustard, AB, ScD
S. Naumann, BSc MSc, PhD
H. Polatajko-Howell, BOT, MEd, PhD, OT(C) (Chair)
M. R. Popovic, MSc, MASc, PhD
S. Rappolt, BSc(OT), MSc, PhD
D. T. Reid, BSc(OT), MEd, PhD (Coordinator of Graduate Studies)
R. M. Renwick, BA, Dip(P&OT), PhD
E. Roy, BSc, MSc, PhD, CPsych
D. L. Streiner, BA, MS, PhD, CPsych
D. T. Stuss, BA, BPh, MA, PhD, University Professor
S. G. Thomas, BSc, MSc, PhD
M. Verrier, DipP&OT, MHSc
K. K. Yoshida, BPhE, BSc(PT), MSc, PhD
N. Young, BSc(PT), MSc, PhD

Members Emeriti

J. Friedland, BA, Dip(P&OT), MA, PhD

Associate Members

A. Agur
D. Beaton, BScOT, MSc, PhD
D. Cameron, BSC(OT), MEd, PhD
D. R. Dawson, BSc, MSc, PhD
R. S. Goldstein, MB, ChB, MRCP, FRCP(C), FCCP
S. Grace
M. J. Graveline, BSC(PT), MSc, PhD
R. Green
J. Jutai, CPsych, PhD
J. Laprade, BScPT, MSc, PhD
C. M. Morshead
E. Nussbaum, BSc(PT), MEd
B. Secker, BA, MA, PhD
F. Shein, BSc, MEng, PhD
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The Graduate Department of Rehabilitation Science provides opportunities for the systematic study at both the M.Sc. and Ph.D. level.

The M.Sc. program focuses on the study of the physical and psychosocial dimensions of human function throughout the life span of individuals with impairments, disabilities, and/or handicaps. The M.Sc. in Rehabilitation Science is a thesis master's program preparing graduates for research careers and Ph.0. studies and should not be confused with a graduate entry-level program leading to professional practice.

The Ph.D. program is designed to prepare academic faculty and rehabilitation scientists for the global market. The program includes core and advanced courses in rehabilitation science theory and research, courses in the field of physical rehabilitation and psychosocial rehabilitation as well as courses in occupational science and physical therapy science. The program is designed to optimize the exceptional resources and build on the significant research activity that exists in the Rehabilitation Sciences at the Centre for Function and Well-Being and University of Toronto Health Science Complex.

Enquiries

Enquiries should be made to the Administrative Assistant at the above address.

Degree of Master of Science

Candidates for this degree must have graduated with a four-year University of Toronto B.Sc. degree, or equivalent, with special training in occupational therapy, physical therapy, or a related field, or the equivalent from a recognized university with a B+ average in the final two years of undergraduate study. Related fields might include nursing, psychology, sociology, social

work, physical and health education, basic sciences, biomedical engineering, kinesiology, and others. Evidence of written and verbal proficiency in English is required for applicants whose first language is not English (see SGS Admissions Standards and Procedures).

The M.Sc. program in Rehabilitation Science includes both course work and a thesis. Minimum requirements include REH 1100H Theory and Research in Rehabilitation Science, REH 2001Y Rehabilitation Presentations and Proceedings, one half-course in research methodology appropriate to thesis design, and at least one additional half-course related to the field of study. Candidates must submit a thesis on their research and be examined by the Thesis Committee.

The program requires a minimum of 12 months of full-time study. Candidates should be aware that the completion of the thesis may take longer. Exceptional students may be considered for enrolment in a part-time program. There will be no residency requirement for part-time students. They must complete the program within five years; however, all course work must be completed within the first two years of the program. Part-time students must agree to an annual Learning Contract and must submit to the Department a Program Map (planned with his or her supervisor). Part-time students should be aware that it is the student's responsibility to modify his or her schedule to accommodate required course work since course times are not flexible.

Combined Master of Science in Physical Therapy/Master of Science (Physical Therapy and Rehabilitation Science)

A combined M.Sc.PT/M.Sc. (Physical Therapy and Rehabilitation Science) option allows high-performing Physical Therapy students to pursue an academic research career. This option provides an opportunity for physical therapy professional master's students to fast track towards a Ph.D. program. Students engage in a research program independently and complete the MSc. thesis requirements.

Degree of Doctor of Philosophy

Admission Requirements

Candidates for the Ph.D. degree are accepted via one of three routes:

1 After completion of a thesis master's degree or an equivalent M.Sc.OT or M.Sc.PT degree with a research component, with a minimum **A-** standing from a recognized University.

2 M.Sc.Ph.D. transfer program. Outstanding students in an M.Sc. program may be considered for entry into the Ph.D. program without completing their M.Sc. thesis. Those students may petition to transfer into the Ph.D. program within 18 months of registration in a M.Sc. program. The student must:

- maintain satisfactory performance (minimum A- average) in master's course work;
- prepare and defend a thesis proposal to an examining committee; and
- complete the prerequisite course work.

All transfers require the approval of the Graduate Coordinator.

3 Direct entry into the Ph.D. program. For outstanding students, direct entry into a Ph.D. without a previous master's degree will be considered. The following requirements are in addition to the normal requirement for admission to the Ph.D. program. 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; complete the prerequisite course work;
- complete courses REH 1100H Theory and Research in Rehabilitation Science, REH 1130H Theory and Research in Occupational Science or REH 1140H Theory and Research in Physical Therapy and REH 1120H Research Methods for Rehabilitation Science plus
- successfully complete a qualifying examination within the first 18 months of the program.

The Ph.D. graduate program emphasizes research work. 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.

Program Requirements

Students will be required to take a minimum of two half-courses, the research presentations course, and complete and defend a thesis.

English Language Proficiency

Applicants, whose first language is not English, must provide evidence of written and verbal proficiency in English by completing one of the following tests:

1 Test of English as a Foreign Language (TOEFL) and the Test of Written English (TWE). Minimum scores required:

TOEFL	Paper-based exam	600
TOEFL	Computer-based exam	250
TWE	Paper-based exam	5
TWE	Computer-based exam	5

2 Michigan English Language Assessment Battery (MELAB) 87
3 International English Language Testing System (IELTS) 7.5

Collaborative Programs
The Graduate Department of Rehabilitation Science participates in the following collaborative programs:
1 Aging and the Life Course
2 Biomedical Engineering
3 Cardiovascular Sciences
4 Health Care, Technology and Place (Ph.D.)
5 Health Services and Policy Research
6 Neuroscience
For more details, consult the separate entries in this calendar.

Courses of Instruction
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/K. Berg, H. Polatajko
REH 1110H Rehabilitation Services Research and Policy/S. Rappolt
REH 1120H Research Methods for Rehabilitation Science/S. B. Jaglal
REH 1130H Theory and Research in Occupational Science/H. J. Polatajko
REH 1510H Disordered and Restorative Motor Control/W. McIlroy
REH 1520H Physiological Factors Constraining Rehabilitation of the Elderly/ S. G. Thomas
REH 1540H Research Topics in Assistive Technology/D. T: Reid, A. Mihailidis
REH 1610H Environmental Theory in Rehabilitation/K. A. Boschen
REH 1620H Methodological Issues in Research on Aging and Health/ A. Colantonio, C. Cott
REH 1630H Psychosocial Adjustment and Quality of Life Issues/ R. M. Renwick, J. E Friedland
REH 1640H Sociology of Disability/ K. K. Yoshida
REH 2000H Individual Reading and Research Course/D. Brooks (Coordinator)
REH 2001Y° Rehabilitation Presentations and Proceedings (Credit/No Credit)/ K. A. Boschen
REH 3100H Advanced Rehabilitation Research Issues/K. *Berg,* H. Polatajko

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

Religion RLG

Graduate Faculty

Full Members

L. J. Abray, BA, MA, MPh, PhD
P. Airhart, BA, MA, PhD
J. S. Brownlee, BA, MA, MPh
J. M. Bryant, BA, MA, PhD
R. A. Campbell
I. Cochelin, BSc, BA, MA, DEA, PhD
J. H. Corbett, BA, MA, PhD
H. Cunningham, BA, MA, PhD
J. J. DiCenso, BA, MA, PhD (Chair)
D. Dixon
T. Donaldson, BSc, MRel, ThM, ThD
A. Dooley, BA, MA, PhD
K. Eisenbichler, BA, MA, PhD
H. FOX, BA, BSc, MA, MS, PhD
R. B. Gibbs, BA, MA, PhD
G. S. Gillison, BA, PhD
J. W. Goering, BA, MAR, MA, MSL, PhD
P. W. Gooch, BA, MA, PhD
K. H. Green, BA, MA, PhD
S. E. Guenther, MA, PhD
R. W. Guisso, BA, DPhil
M. Hewitt, BA, MA, MA, PhD
C. Kanaganayakam, BA, PhD
M. Kasturi, BA,MPHIL,MA,PHD
M. G. Kingwell, BA, MLitt, PhD
P. Klassen, BA, MA, MPhil, PhD (Director of Graduate Studies)
J. Kloppenborg, BA, MA, PhD
L. Lange, AB, MA, PhD
R. J. Lynn, BA, MA, PhD
M. McGowan, BA, MA, PhD
C. T. Mclntire, BA, MA, MDiv, PhD
N. F. McMullin, BA, STB, MTh, PhD
M. D. Meyerson, BA, MA, PhD
K. R. Milk, BA, MA, DPhil
A. Mullin-Cuthbert, AB,PhD
H. Najman, BA,MA.PHD
L. Northrup, BA, MA, PhD
D. Novak, AB, MHL, rabbinical diploma, PhD
R. OToole, BA, MA, PhD
B. G. Pronger, BA, MSc, PhD
J. A. Reilly, BA, MA, PhD
S. M. Sandahl, MA, DES, PhD
R. M. Sarabia, BA, MA, PhD
L. E. Schmidt, BA, MA, PhD
V. T. Shen, BA, MA, PhD, Lee Chair
K.-L. Shun, BA, MA, PhD
R. E. Sinkewicz, BA, AM, MDiv, DPhil
I. L. Stefanovic, BA, MA, PhD
M. E. Subtelny, BA, PhD
R. Sweetman. BA. MA, MSL, PhD
J. G. Taylor, BA, MTh, MPhil, PhD
C. N. Terpstra, BA, MA, PhD
P. A. Thompson, BA, MA, PhD
D. H. Turner, BA, MA, PhD
L. Vaage, BA, MDiv, PhD
J. M. Vertin, BA, STB, STL, MA, PhD
B. Walfish,'BSc, MA, PhD

Members Emeriti

W. J. Callahan, AB, MA, PhD
A. T. Davies, BA, BD, STM, PhD
G. A. Nicholson, BA, BD, MA, PhD
J. T. O'Connell, BA, MA, PhD
B. Peckham, BA, MA, PhL, PhD
G. P. Richardson, Bar, BD, PhD
A. N. Sheps, BA, MA, PhD
B.C. A. Stock, AB, PhD

Associate Members

A. Dhand, BA, MA, PhD
F. M. Garrett, BA, MA, PhD
J. A. Harris, BA, MA, PhD
C. Hirschkind, BA, MA, PhD
M. Jiwa, BA, MTS, MA, PhD
A. Khan, BS, BD, MA, PhD
S. Kumar, BSc, MSc, MA, PhD
R. Locklin, BA MTS, PhD
W. Marshall, BA, MA, PhD
W. A. Saleh, BA, MA, PhD
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E. A. Yeoman

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The Centre for the Study of Religion, the graduate unit of the Department for the Study of Religion, offers programs for the study of religion at both the master's and doctoral levels 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.

Admission

The following materials should be sent directly to the Centre:

1 the admissions application form;
2 all transcripts;
3 a statement of aims for graduate study (200 words). Doctoral applicants should indicate a possible area of thesis work;
4 three confidential letters of recommendation;
5 a brief academic resume;
6 a sample of academic writing.

Degree of Master of Arts

Admission Requirements

The normal prerequisite is a four-year bachelor's degree with specialization at the undergraduate level in a program of religious or cognate studies broadly equivalent to the University of Toronto's B.A. 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

The M.A. program has two components.

1 Courses. Four full courses, or the equivalent, are required, including RLG 2000Y *Major Research Paper.* An extended program requires additional courses, some of which may be at the undergraduate level. Satisfactory performance at the Centre requires the completion of all course work taken for graduate credit with an average grade of at least A-.

2 Language(s). Reading knowledge of at least one language, in addition to English, selected from languages of modern scholarship and/or necessary source languages. Decisions about language requirements and how they shall be satisfied in each case are made by the Associate Director.

Degree of Doctor of Philosophy

Admission Requirements

For admission to the doctoral program, students normally must have completed all requirements of the Centre's M.A. program, or of 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

Entry into a new program is ordinarily permitted only in September. Upon entry into the Centre, students will be assigned an advisory committee to assist them in structuring their program. Students are required to spend at least two winter sessions on campus in full-time study, normally those of the first two academic years of a program. The Ph.D. program has five components.

1 Courses. Students must complete a minimum of three full courses or the equivalent. These shall include RLG 1000Y *Method and Theory in the Study of Religion* and at least one half-course in an area other than that designated as the area of specialization. Students may be required to take more than three courses if their preparation is considered deficient in a subject required for their program. Satisfactory performance at the Centre requires the completion of all course work taken for graduate credit with an average grade of at least A-.

2 Languages. Reading knowledge is required 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. Preparation for at least one of these languages usually would have been completed prior to entry into the program. Decisions about language requirements and how they shall be satisfied in each case are made by the student's advisory committee in consultation with the Director of Graduate Studies. The language requirements must be fulfilled before writing the general examinations.

3 Thesis Proposal. Upon completion of the course work the candidate must submit a thesis proposal for approval by the candidate's supervisory committee.

4 General Examinations. The candidate's supervisory committee will set general examinations to assess the candidate's readiness for thesis research. Written examinations will cover (a) the candidate's area of specialization, and (b) at least one important cognate area. An oral examination on all materials assigned for the general examinations will follow. The general

examinations must be completed during the third year of doctoral study.

5 Thesis. Upon successful completion of the general examinations, candidates will proceed to research and write a doctoral thesis which must be defended successfully at an oral examination. The writing of the thesis should not require more than two years.

Collaborative Programs

The Centre participates in the following collaborative programs:

1 Bioethics
2 Editing Medieval Texts
3 Ethnic and Pluralism Studies
4 International Relations
5 Jewish Studies
6 South Asian Studies
7 Women's Studies

For more details, consult the separate entries in this calendar.

Courses of Instruction

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/Staff
RLG 1200H The M.A. Method and Theory Workshop/Staff
RLG 1500Y Directed Reading/Staff
RLG 1501H Directed Reading/Staff
RLG 1502H Directed Reading/Staff
RLG 2000Y Major Research Paper/Staff
RLG 2004H Christianity and Science/ R. Campbell
RLG 2007H Ethics, Society, and Technology/ L. E. Schmidt
RLG 2011H Evil and Faith: Studies in Judaeo-Christian Theodicy/P. W. Gooch
RLG 2012Y Natural Law in Judaism and Christianity/D. Novak
RLG 2016H Radical Evil: Religious, Philosophical and Psychological Response/M. A. Hewitt
RLG 2018H Religion and Bioethics/D. Novak
RLG 2019H Religion and the Environment/ *S.* Scharper
RLG 2021H Historiography of Religions/C.T. McIntire
RLG 2025H Critical Social Theory and Feminist Religious Thought/M. Hewitt
RLG 2026H Modernity, Postmodernity, and the Future of Religion/M. Hewitt
RLG 2028H Enemies of God: Religion and Violence in a (Post) Modern Time/M. Hewitt
RLG 2035H Religion and Material Culture in the Ancient World/G.P Richardson
RLG 2037H Religion and Healing/P. Klassen
RLG 2038H Body and Transcendence/ *B.* Pronger
RLG 2041Y Biblical Interpretation: Its History and Theory/Staff
RLG 2043Y Studies in Jewish and Christian Liturgy to the Seventh Century/ J. H. Corbett
RLG 2060H Religion and Philosophy in the European Enlightenment/J. Di Censo
RLG 2073H Indigenous Peoples and Modern European Thought/L. M. Lange
RLG 2088H The Birth of Anthropology and the study of Primitive Religion/ G. Gillison
RLG 2089H The Study of Non-Literate Religions in Nineteenth- and Early Twentieth-Century France/ G. Gillison
RLG 2090H Topics in Psychology of Religion/ J. J. DiCenso
RLG 3101H Yahweh and Other Deities in Ancient Israel/G. Taylor
RLG 3102H Problems in Northwest Semitic Religions/J. B. Peckham
RLG 3103H Problems in Israelite Religion/ J. B. Peckham
RLG 3142H The Book of Genesis/G. Taylor
RLG 3143H Hebraica/G. Taylor
RLG 3201H Topics in Christian Origins I/*Staff*
RLG 3202H Topics in Christian Origins II/Staff
RLG 3205H Early Christian Self-Definition and the Separation from Judaism/ T. Donaldson
RLG 3220H Topics in Early Christian History/ P. Richardson
RLG 3224Y Early Eastern Christianity/J. H. Corbett
RLG 3225Y Early Churches in Cross-Cultural Perspective/J. Corbett
RLG 3228H Social History of the Early Jesus Movement/J. Kloppenborg
RLG 3232H Sacred Space in the Christian Tradition/J. Harris
RLG 3235H Liberation Theology: Examining the Work of Gustavo Guitierrez and Thomas Berry/S. Scharper
RLG 3236H Religious Pluralism and the Church/R. Locklin
RLG 3237H Religion and Social Reform in Canada/P. Airhart

RLG 3240H Studies in Early Christian Literature/P. Richardson
RLG 3243H The Synoptic Problem/J. S. Kloppenborg
RLG 3244H The Sayings Gospel Q: Text and Social History/J. S. Kloppenborg
RLG 3248H Gospel of John and the Jesus Traditions/J. Kloppenborg
RLG 3249H Studies in the Synoptic Gospels/ J. Kloppenborg
RLG 3252H The Letter of James and Early Christian Wisdom/J.S. Kloppenborg
RLG 3254H Readings in Tibetan Buddhism/ F. Garrett
RLG 3255H Aspects of Matthean Interpretation/T. Donaldson
RLG 3258H Salvation as Liberation in Paul/T. Donaldson
RLG 3260H Twentieth-Century Political Philosophy within Christianity/L.E. Schmidt
RLG 3261H Augustine, Aquinas, Lonergan/M. Vertin
RLG 3265H Christian Spirituality and Modern Culture/P. Airhart
RLG 3270H Christianity and Crisis in North America/P. Airhart
RLG 3424H Religion and Society in Classical Japan/N. McMullin
RLG 3444H Buddhism and Society in East Asia/N. McMullin
RLG 3452H The History and Historiography of Buddhism/F. Garrett
RLG 3500Y Special Topics in Islamic Studies/ Staff
RLG 3501H Special Topics in Islamic Studies/ Staff
RLG 3611H Topics in Rabbinic Midrash/H. fox
RLG 3621H Modern Jewish Thought/K. H. Green
RLG 3622H Maimonides and His Modern Interpreters/K. H. Green
RLG 3623H Philosophy, Theology, and Politics: The Thought of Leo Strauss/K. Green
RLG 3624Y The Jurisprudence of Maimonides/D. Novak
RLG 3631H The Community of the Dead Sea Scrolls/J, H. Corbett
RLG 3641H Interpretations of Jewish Tradition/H. Fox
RLG 3645Y The Jewish Legal Tradition/H. Fox
RLG 3647H Early Rabbinic Judaism/H. Fox
RLG 3651H Hellenistic-Jewish Thought/H. Fox
RLG 3653Y Jewish Exegetical Traditions in Antiquity/H. Fox
RLG 3655H Readings in Jewish Literature (200 BCE - 200 CE)/ T. Donaldson
RLG 3661H Judaism and Philosophy/D. Novak
RLG 3691 H Themes in Jewish Studies I: Jewish Culture in Medieval Latin, Greek and Arabic Europe/ N. de Lange
RLG 3692H Themes in Jewish Studies II
RLG 3712H Asceticism in the Hindu Tradition/ S. Sandahl
RLG 3713Y Hinduism and Politics/S. Sandahl
RLG 3741H Interpretations of Hindu Tradition/ Staff
RLG 3743H The Bhakti Tradition/Staff
RLG 3744H Hindu Epics/A. Dhand
RLG 3745H Hindu Myths and Mythology/Staff
RLG 3761H Nature and Religion in South Asia/S. Kumar
RLG 3930H Religion in Canada Since 1867/ P. Airhart
RLG 3931 H Topics in North American Religions/P. Klassen
RLG 3941Y Celtic Mythology/A. Dooley
RLG 3944H Uses of the Bible in the Middle Ages/J. Harris
RLG 4000Y Directed Reading: TST Seminar
RLG 4001H Directed Reading: TST Seminar
JAR 6053H Aboriginal Religion in Comparative Experience/D, H. Turner
JAR 6054H The Anthropology of Religious Experience/D. H. Turner

Other Departments

Students may take the following courses offered by other graduate units.

East Asian Studies

EAS 1143Y Civilization in Medieval China/ R. Guisso
EAS 1223Y Readings in Dharmasastra/ S. Sandahl
EAS 1500H,Y The Structure of the Classical Sanskrit Language (formerly EAS 2004Y Introduction to Sanskrit)/S. Sandahl
EAS 1501 H Intermediate Sanskrit Texts/ S. Sandahl
EAS 1999Y Seminar in East Asian Studies in Bibliography, Reference and Research Methodology/R.J. Lynn
EAS 2003Y Advanced Sanskrit Texts I/ S. Sandahl
EAS 2006H,Y Advanced Sanskrit Texts II/ S. Sandahl
EAS 2007H Advanced Sanskrit Texts I/ S. Sandahl

English

ENG 2155Y Thomas More and the History of Utopian Thought/B. C. Stock

Ethnic and Pluralism Studies (Collaborative Program)

JTH 3000H Coordinating Seminar in Ethnic and Pluralism Studies/Staff

History

HIS 1000H Historiography/C. T. Mclntire
HIS 1201H The Materials of Medieval History/J. Goering
HIS 1204H The Life and Writings of Thomas Aquinas/J. Goering
HIS 1206H Popular Religion in the Middle AgeslJ. Goering
HIS 1207H Pastoralia: The Medieval Literature of Pastoral Care/J. Goering
HIS 1208H Writings of Robert Grosseteste/ J. Goering
HIS 1211Y History and Historiography in the Golden Legend/J. Goering
HIS 1213H Medieval Monasticism/I. Cochelin
HIS 1221H Topics in Early Modern Social History/N. Terpstra
HIS 1222H Ritual in Renaissance and Early Modern Europe/N. Terpstra
HIS 1230H The Sexes in the Western World, 1450-1650/J. Abray
HIS 1242H Religion and Society in Europe, 1760-1914/C.T: Mclntire
HIS 1536H Religion, Society, and Politics in Eighteenth- and Nineteenth-Century America/A. Sheps
HIS 1537H Society, Culture and Politics in the Early United States, 1780-1850/ A. Sheps
HIS 1674Y Japanese Political Thought, 1868-Present/. Brownlee
JHA 1690Y Nationalism in India—Before and After Independence/Staff

Italian Studies

ITA 1545H The Sacra Rappresentazione/ K. Eisenbichler

Medieval Studies

MST 1015Y Latin Hagiographic Literature, ca. 300-800/J.H. Corbett
MST 1210H Judeo-Christian Koine Greek/ R. E. Sinkewicz
MST 1212H The Apocryphal Bible/R. E. Sinkewicz
MST 1382H Old English Hagiography, Mostly Aelfrician /P. Thompson
MST 3010H Augustine of Hippo/B. Stock
MST 3205Y Violence in Medieval Society/ M. Meyerson
MST 3210H Medieval Spain, 1000-1300/ M. Meyerson
MST 3261H Cluny in the Central Middle Ages/ I. Cochelin
MST 3265H Hagiographies/I. Cochelin
MST 3401H Introduction to Medieval Christianity/R. E. Sinkewicz
MST 3405H Early Christian Monasticism/R. E. Sinke wicz
MST 3415Y John Cassian and Early Monasticism in Gaul/R. E. Sinkewicz
MST 3425H Eastern Christianity 325-1453CE/ R. E. Sinkewicz

Near and Middle Eastern Civilizations

NMC 1305H Early Hebrew Epigraphy/J. *B.* Peckham
NMC 1311Y Post-Biblical Hebrew: Mishnah and Midrashim/H. Fox
NMC 1324Y Hebrew Legal Codes, Medieval and Modern/. Fox
NMC 1651H Northwest Semitic Epigraphy/J. *B.* Peckham
NMC 1652H Ugaritic Religious Texts/J.B. Peckham
NMC 2052Y Islamic Religious Thought/M.E. Marmura
NMC 2053H Islam in Cross-Cultural Contact: Interreligious and Intercultural Encounters/Staff
NMC 2055H The Qur'an and Its Interpretation/ Staff
NMC 2056H Reading in Qur'an and Tafsir/Staff
NMC 2090Y Islamic History to the Fall of Baghdad/L. Northrup
NMC 2112Y Medieval Islamic Institutions/ L. Northrup
NMC 2119Y Readings in Medieval Arabic Historical and Documentary Sources./L. Northrup
NMC 2131Y Ethics and Education in Medieval Arabic Texts/S. Guenther
NMC 2132Y Hadith: Classical Religious Literature in Islam/S. Guenther
NMC 2133H Medieval Arabic Sources on Islamic Though/S. Guenther
NMC 2170Y Topics in Modern Middle Eastern History/J. Reilly
NMC 2172Y Modern Arab History/J. Reilly
NMC 2221Y Medieval Persian Ethical and Advice Literature/M. E. Subtelny
NMC 2222Y Persian Mystical Poetry/M. E. Subtelny

Philosophy

PHL 2015H	Confucianism/V.Shen
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/M. Vertin
PHL 2119H	Philosophical Foundations of Multidisciplinary Studied M. Vertin
PHL 2140H	Feminist Philosophy/L. Lange
PHL 2144H	Seminar in Social Philosophy
PHL 2146H	Topics in Bioethics
JVP 2147H	Environmental Philosophy/ I. Stefanovic
PHL 2151H	Aesthetics
PHL 2181H	Philosophy of Religion

Sociology

SOC 6018H	Society of Religion I
SOC 6118H	Society of Religion II
SOC 6201H	Sociological Theory Ill - Theory and Method in Historical Sociology

Russian and East European Studies RUS

Graduate Faculty

Full Members

V. Ambros, BA, MA, PhD
C. J. Barnes, BA, MA, PhD
G. Bisztray, PhD
Y. M. Bodemann, MA, PhD
R. Bogert, BA, MA, PhD
A. Braun, BA, MA, PhD
R. J. Brym, BA, MA, PhD
F. Csillag, MSc PhD
R. B. Day, BA, MA, Dip REES, PhD
M. Dimnik, BA, MA, MDiv, DPhil
E. W. Dowler, BA, AM, PhD
H. B. Friedmann, AB, MA, PhD
R. E. Johnson, BA, MA, PhD
J. Kivimae, BA, PhD
C. E. Kramer, BA, MA, PhD
N. Krementsov, Candidate of Sciences
T. Lahusen, BA, MA, PhD
K. A. Lantz, BA, MA, PhD
L. Livak
P. R. Magocsi, AB, MA, MA, PhD, FRSC
D. Orwin, BA, MA, PhD
V. Ostapchuk, BA, PhD
R. W. Pruessen, BA, MA, PhD
A. Rossos, BA, MA, PhD
J. Schallert, BA, MA, MA, PhD (Coordinator of Graduate Studies)
D. V. Schwartz, BA, MA, PhD
B. A. Sigmon, BA, MS, PhD
S. Z. Solecki, BA, MA, PhD
P. H. Solomon, BA, MA, CertRusslnst, PhD (Director)
S. Solomon, BA, MA, CertRusslnst, PhD
M. E. Subtelny, BA, PhD
M. D. Tarnawsky, BA, PhD
L. A. Viola, BA, MA, PhD
B. S. Wellman, BA, MA, PhD
P. J. Wrobel, MA, PhD

Members Emeriti

H. L. Dyck, BA, MA, PhD
S. M. Eddie, BS, PhD
R. Gregor, BA, MA, PhD
F. J. Griffiths, BA, MIA, PhD
W. W. Isajiw, BA, MA, PhD
R. Lindheim, BA, MA
D. Pokorny, PrornFil, CSc

Associate Members

R. Austin, BA, MA, PhD
S.t.e.r.l.i.n. Beckwith
S. D. Campbell, BA, MA, PhD
E. S. Klein, PhD
K. Knop, BSc, LLB, LLM, SJD
T. Koznarsky, MA, PhD
M. L. Marrese, BA, MA, PhD
M. Schonberg, BA, MA, PhD
T. Trojanowska, BA, MA, PhD
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The Centre for Russian and East European Studies (CREES) was founded in 1963 to further the development of undergraduate and graduate studies and scholarly research related to Russia and Eastern Europe. This area includes both the USSR and pre-1917 Russia, and the region of Eastern Europe, with special emphasis on the Slavic nations. The Centre acts as a liaison between the departments and advises students in matters relating to the study of Russia and Eastern Europe. Graduate work relating to Russia, the Soviet Union, and Eastern Europe may be undertaken for the M.A. and Ph.D. degrees in a discipline such as economics, geography, history, political science, Slavic languages and literatures, or sociology under the appropriate department. In addition, the Centre offers its own M.A. program in Russian and East European Studies.

Degree of Master of Arts

Admission and Special Requirements
Candidates for the M.A. 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. Candidates should have a minimum of one academic year of study in a relevant language and are urged to undertake additional language training in the summer preceding entry to the program.

The M.A. program requires a minimum of two sessions of full-time graduate study. Students will be required to take six full-course equivalents (FCE). Of the six, at least two FCE must

be taken in a discipline chosen by students as their major discipline and one must be RUS 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 (Russian and East European Studies)
The J.D./M.A. program is intended for highly qualified candidates who wish to combine the study of law with the opportunities that a detailed knowledge of eastern Europe and the countries of the former Soviet Union now offer. The program allows candidates to receive the combined degree in four years of study instead of the five years needed to take the degrees separately.

Candidates will be admitted to the Faculty of Law in the first year and receive deferred admission to the M.A. program in Russian and East European Studies. The first year of study will consist of the first year of the J.D. In the second, third, and fourth years of the combined program, students will pursue credits in both Law and Russian and East European Studies. Applicants who have completed a year in the Russian and East European Studies master's program or the first year of the J.D. can apply for admission to the combined program.

Applicants must separately apply to and be accepted by both the J.D. program and the M.A. (Russian and East European Studies) programs. They must satisfy the normal admission requirements for each program.

Combined Master of Arts (Russian and East European Studies)Master of Business Administration
The M.A./M.B.A. program is intended for highly qualified candidates who can benefit from the combined study of Russia and Eastern Europe and Business Administration. The program allows candidates to receive the combined degrees in three years instead of the four needed to complete the degrees separately.

Candidates will be admitted to the Faculty of Management in the first year and receive a deferred acceptance to the M.A. (Russian and East European Studies) program. The first year of study will consist of the M.B.A. core program. In the second and third years of the program, students will pursue courses in both Management and in Russian and East European Studies. Applicants who have completed a year in the Russian and East European Studies master's program or the first year of the M.B.A. can apply for admission to the combined program.

Applicants must apply separately to and be accepted by both the M.B.A. and the M.A. (Russian and East European Studies) programs. They must satisfy the normal admission requirements for each program.

Ethnic and Pluralism Studies Collaborative Program
CREES is a member of the Collaborative Graduate Program in Ethnic and Pluralism Studies. Candidates must apply to and register with CREES and must follow a program of studies acceptable to both CREES and the Ethnic and Pluralism Studies Program. Upon successful completion of the requirements, students receive on their transcripts the notation "Completed Collaborative Graduate Program in Ethnic and Pluralism Studies" in addition to the M.A. in Russian and East European Studies.

Courses of Instruction
Not all courses are offered every year. Consult the Centre for course availability.

Required
RUS 2000Y Research Seminar/Staff

Optional

Comparative Literature
COL 5027H Memory, Trauma, and History/ T. Lahusen
COL 5031H Russian Avantgarde Concepts in Art and Literature: Symbolism, Futurism, Constructivism, Formalism/J. Bochow

Economics
RUS 1197H The Economics of Transition in Russia
RUS 1198H From Plan to Market: The Economics of Transition

Film and Music
RUS 1187H Music in Russian Culture

History
HIS 1279H World War II in East Central Europe (joint graduate/ undergraduate)/P. Wrobel
HIS 1280Y History of Soviet Cinema (joint graduate/undergraduate)/ T. Lahusen
HIS 1281H Experiences of Real Socialism/ T. Lahusen
HIS 1282H Totalitarian Culture/T. Lahusen

HIS 1283H War, Plague and Hunger in the Early Modern Baltic/J. Kivimde
HIS 1284H The Baltic World/J. Kivimae
HIS 1285Y The Ukrainian National Revival/ P. Magocsi
HIS 1287H Polish Jews Since the Partitions of Poland/P. Wrobel
HIS 1288H Age of Experiments/P. Wrobel
HIS 1291H Topics in Russian and Soviet Social History/R. Johnson
HIS 1292H The Russian Revolution/ R. Johnson
HIS 1293Y Kievan Rus'/P. Magocsi
HIS 1295H Soviet History Seminar/L. Viola
HIS 1297H Problems of Political Survival in Eastern Europe Since 1848/ A. Rossos
HIS 1298H Problems in the Social and Cultural History of Imperial Russia/M. Marrese
HIS 1299H Topics in Russian Intellectual History/W. Dowler
JHP 1289Y Twentieth-Century Ukraine/ P. Magosci
JHP 2301Y Linguistic and Cultural Minorities in Europe/P. Magosci
RUS 1186H The Past As Prologue: East Central and Southeastern Europe in the Interwar Period/ R. Austin
RUS 1190H Peasants in Russia and East Europe/R. E. Johnson
RUS 1191H Contemporary Southeastern Europe/ R. Austin

Political Science
JHP 1289Y Twentieth-Century Ukraine/ P. Magosci
JHP 2301Y Linguistic and Cultural Minorities in Europe/P. Magosci
POL 2004Y Marxism/R. B. Day
POL 2304Y Soviet and Post-Soviet Politics/ D. V. Schwartz, P. H. Solomon
POL 2308Y Politics and Government of Eastern Europe/A. Braun
POL 2324H Ethnonationalism and State-Building: The Communist and Post-Communist Experience/ D. V. Schwartz
POL 2325Y The Politics of Post-Communism/ J. Kopstein
RUS 1184H Polls and Public Opinion in Post-Communist Countries/ B. Sergeyev
RUS 1188H Public Policy in Post-Communist Eastern Europe

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/R. Bogert
SLA 1517H Modern Serbian Bards/R. Bogert
SLA 1520H Bosnia in Literature and Culture: Between Croats and Serbs/ R. Bogert
SLA 1521H Topics in Modern Croatian Literature/R. Bogert
SLA 1522Y The Modern Serbian Novel/ R. Bogert
SLA 1537H Political Drama from Dubrovnik to the Danube/R. Bogert
SLA 1547H South Slavic Folklore/R. Bogert

Czech and Slovak Literatures
SLA 1600Y Studies in Czech and Slovak Literatures/V. *Ambros*
SLA 1601Y Modern Czech Fiction/V. Ambros
SLA 1603Y Readings in Czech/Russian Literary Theory/V. Ambros
SLA 1604Y History of the Czech Literary Language/ V: Ambros
SLA 1605Y Modern Czech Drama and Theatre/V. Ambros
SLA 1606H Czech Short Story/V. Ambros

Estonian Literature
SLA 1420Y Estonian National Identity/ H. Murk
SLA 1421Y Women in East European Fiction/ T: Kirss

Hungarian Literature
HUN 1440Y The Modern Hungarian Novel/ G. Bisztray
HUN 1450H Hungarian Drama/G. Bisztray
HUN 1451H Three Hungarian Film Directors/ G. Bisztray

Polish Literature
SLA 1304H Staging God, Man, and History: Polish Drama and Theatre in Context/T Trojanowska
SLA 1305Y Polish Fiction or A Disrupted Funeral of the Novel/ T: Trojanowska
SLA 1306H Polish Poetry: Shaping the National Canon/T Trojanowska
SLA 1307H Studies in Polish Poetry: Twentieth Century/ T. Trojanowska
SLA 1308Y Topics in Polish Literature/ T. Trojanowska

SLA 1310H Revolutions in the Theatre: Slanislavski, Meyerhold, Grotowski, and Kantor/ T: Trojanowska
SLA 1312Y Modernism and Postmodernism in Polish Literature in the Twentieth Century and Beyond/ T: Trojanowska
SLA 1331H Imagining "The Other" in Polish Literature and Culture/ T: Trojanowska

Russian Literature
SLA 1201Y Studies in the Russian Novel/ Staff
SLA 1203Y Studies in Russian Modernism/ Staff
SLA 1204H Contemporary Russian Literature/ Z. Davydov
SLA 1205H Literary Scandals in Twentieth-Century Russia/Z. Davydov
SLA 1210H Studies in Medieval Russian Literature/Staff
SLA 1211Y Studies in the Russian Drama: Eighteenth to Twentieth Centuries/R. Lindheim
SLA 1212H Gogol/Staff
SLA 1215H Studies in Russian Literature of the Eighteenth Century/Staff
SLA 1225H Russian Literature and Criticism in the 1860s/K. A. Lantz
SLA 1230Y Russian Emigre Literature, 1917-1945/O. Bakich
SLA 1231H Twentieth Century Russian Prose I: Modernism, Avant-garde, Totalitarianism/L. Livak
SLA 1232H Russian Symbolism/L. Livak
SLA 1233H Studies in Modern Russian Poets/ C. I. Barnes
SLA 1234H Dostoevsky/D. Owin
SLA 1235H Pasternak/C.J. Barnes
SLA 1236Y Pushkin/Staff
SLA 1237H Twentieth-Century Russian Prose II: Internal and External Exile/ L. Livak
SLA 1238H Chekhov/R. Lindheim
SLA 1239H Vladimir Nabokov's American Novels/L. Livak
SLA 1240H L. Tolstoy/D. Orwin
SLA 1243H Leskov/K. A. Lantz
SLA 1250H Russian Journalism: 1830-1860, The Formative Decades/ R. Lindheim
SLA 1251H Pushkin and His Age/ J. Benek-Mellow

SLA 1900Y Russian Poetry (for M.A. candidates only)/C. J. Barnes

Ukrainian Literature
SLA 1039Y Kyiv-Kiev-Kijow: A City Through Cultures and Centuries/ T: Koznarsky
SLA 1402Y Studies in Ukrainian Modernism/ Staff
SLA 1403Y Studies in Contemporary Ukrainian Literature/ T: Koznarsky
SLA 1404Y Studies in Ukrainian Poets/ T: Koznarsky
SLA 1405Y Experiments in Ukrainian Prose/ M. Tarnawsky
SLA 1406Y Studies in Ukrainian Literary Criticism/M. Tarnawsky
SLA 1407H Aspects of Literary Translation of Ukrainian/ T. Koznarskx M. Tarnawsky
SLA 1408H Taras Shevchenko/pM. Tarnawsky
SLA 1409H Ukrainian Literature of the Seventeenth and Eighteenth Centuries/M. Tarnawsky

Slavic Linguistics
SLA 1101Y History of the Russian Language (PR)/J. Schallert
SLA 1102Y Advanced Russian Language Skills/C. J. Barnes
SLA 1103H Comparative South Slavic LinguisticslJ. Schallert
SLA 1104Y Old Church Slavonic/J. Schallert
SLA 1105Y Structure of Russian/C. E. Kramer
SLA 1106H Proseminar in Diachronic Slavic Linguistics/J. Schallert
SLA 1107H Comparative West Slavic Linguistics/J. Schallert
SLA 1108H Slavic Dialectology/J. Schallert
SLA 1109H Old Church Slavonic Translation Technique/J. Schallert
SLA 1110H Comparative Historical Slavic Linguistics/J. Schallert
SLA 1112H Tense, Aspect, and Mood in Slavic/C. E. Kramer
SLA 1141H History of the Ukrainian Language/Staff
SLA 1142H Style and Structure of Ukrainian/ Staff
SLA 1150H Russian Since the Revolution/ C. E. Kramer
SLA 1160H Proseminar in Synchronic Slavic Linguistics/C. E. Kramer
SLA 1161H An Introduction to Areal Linguistics: The Balkan Sprachbund/ C. E. Kramer

(PR) Courses with prerequisites

General Slavic

SLA 1036H Metamorphosis of Modernity in Central Europe/V. Arnbros, G. Bisztrag T. Pojanowska

SLA 1037Y Theatre and Cinema in Extremis: Staging Twentieth-Century Aesthetics and Politics/ V. Ambros, T.: Trojanowska

SLA 1038H Magic Prague/V. Arnbros

Reading and Research Courses

RUS 1997Y Reading and Research Ill

RUS 1998H Reading and Research I

RUS 1999H Reading and Research II

For further information about graduate programs and study grants, please contact the Director.

Semiotics (Collaborative Program)

Program Committee

H.V. Luong, BA, MA, PhD/Anthropology
R. Le Huenen, L és L, DenPh, ChPA, FRSC/French, Comparative Literature
P. Perron, BA, D de L'U, ChPA, OPA, FRSC/French, Comparative Literature
R. Capozzi, BA, MA, PhD/Italian, Comparative Literature
M. Gieri, DLett, PhD/Italian, Comparative Literature
M. Danesi, BA, MA, PhD, FRSC/Spanish, French

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Collaborative Program in Semiotics
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Victoria College
University of Toronto
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Fax: (416) 585-4584
E-Mail: semiotics.collab@utoronto.ca
Web: www.utoronto.ca/semiotics

Nature of the Collaborative Program

Graduate units in Anthropology, Comparative Literature, French, Italian, and Linguistics participate in the Collaborative Master's Program in Semiotics at the University of Toronto. The collaborating units contribute faculty, courses, and supervision for master's level research. The Centre for Comparative Literature is the coordinating unit. The program is housed at Victoria College. A Program Committee, chaired by a Program Director, administers the collaborative program.

The collaborative master's degree in Semiotics is a highly interdisciplinary program designed for graduates from various disciplines showing advanced training in semiotics and communication theory. The major topics of emphasis in the Collaborative M.A. Program are general semiotics, anthropological semiotics, historical semiotics, French semiotics, Italian semiotics, Peircean semiotics, applied semiotics, and visual semiotics. The Collaborative Master's Program in Semiotics contributes to the development of an integrated research community at the University of Toronto.

Applicants to the Collaborative Master's Program in Semiotics are expected to meet the admission and degree requirements of both the home unit and the collaborative program. The student's program is subject to the approval of the Program Committee in Semiotics. Upon successful completion of the degree requirements, students will receive the notation "Completed Collaborative Master's Program in Semiotics" on their transcript in addition to the master's degree from their home graduate unit.

Application Procedures

Candidates 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 also submit a supplementary application to the collaborative program. In order to qualify for admission into the Collaborative Master's Program in Semiotics, applicants must be offered admission to a participating graduate unit. Applicants must forward the following to the Director of the collaborative program:

1 A copy of the School of Graduate Studies Application Form submitted to a participating graduate unit
2 Official undergraduate and graduate transcripts from all institutions attended previously and currently
3 At least two letters of reference with specific mention of formal training in general and/or applied semiotics
4 A statement of purpose

Decisions on admission to the Collaborative Program will be made by the Program Director in conjunction with a sub-committee appointed by the Program Committee.

Degree of Master of Arts

Admission Requirements

To be considered for admission to the Collaborative Program in Semiotics at the master's level, applicants must demonstrate knowledge of the various approaches associated with the history and development of semiotics. Applicants lacking interdisciplinary background in the field must be able to demonstrate extensive familiarity with semiotics as applied to a single discipline or a cognate set of disciplines.

Program Requirements

Thesis Master's Degree:
- core course (SEM 1000Y), or one-full course equivalent
- one full course or equivalent selected from course list
- a thesis or major paper related to semiotic topics (approved by the home unit and by the Program Committee in Semiotics)

Non- Thesis Master's Degree:
- core course (SEM 1000Y), or one full-course equivalent
- two full courses, or equivalent selected from the course list

Courses of Instruction

Not all courses are offered every year. Please consult the graduate unit concerning course availability.

SEM 1000Y General Semiotics: from Saussure to Peirce and Eco

Anthropology

ANT 5145H Semiotics of High Culture and Popular Culture/I. Kalmar
ANT 5146Y Classic Texts on the Semiotics of Modern Culture/I. Kalmar
ANT 5167H Language, Ideology, and Political Economy/H. V. Luong

Comparative Literature

COL 1000H Theories of Literature and Criticism/Staff
COL 1210Y Recent Trends in Narrative Theory/J. Miller
COL 1255H Aspects of Structuralism/ R. Le Huenen
COL 1700H Humour in Postmodernity/ E. Kushner
COL 2000H Hermeneutics and Historicity of Texts/M. J. Valdes
COL 2500H Literature and Post-Structuralism/ P. W. Nesselroth
JIC 5000H,Y Narrative and Intertextuality in Italian Fiction/R. Capozzi

French

FRE 1200Y Seminaire de littérature/lStaff
FRE 1300H Chretien de Troyeslf. Collins
FRE 2036H Configurations du genre sexuel dans'la prose/B. Havercroff
FRE 2078H Alterite: formes et signification/ J. Paterson
FRE 2092H La Construction du personnage feminin/J. LeBlanc

Italian

ITA 1051H Italian Semantics/Staff
ITA 1170H Textual Criticism and the Editing of Texts/M. Lettleri
ITA 1729H Contemporary Literary Criticism in Italy/R. Capozzi
ITA 1730Y Aspects of Semiotic Theory and Practice in Italy/Staff
ITA 1810H Studies in Italian Film and Literature/M. Gieri
JIC 5000H,Y Narrative and Intertextuality in Italian Fiction/R. Capozzi
JIL 1140H Semiotics/Staff

Linguistics

LIN 1145H Semantics
LIN 1154H Sociology of Language
LIN 1162H Comparative-Historical Linguistics
LIN 1172H Introduction to Cognitive Linguistics
LIN 1180H History of Linguistic Thought
LIN 1182H Language and Mind
LIN 1200Y Current Issues in Linguistic Theory
LIN 1201H Current Issues in Linguistic Theory
LIN 1245H Advanced Semantics I
LIN 1246H Advanced Semantics II
JIL 1140H Semiotics

Slavic Languages and Literatures SLA

Graduate Faculty

Full Members

V. Ambros, BA, MA, PhD
C. J. Barnes, BA, MA, PhD
G. Bisztray, PhD
R. Bogert, BA, MA, PhD
T. Koznarsky, MA, PhD
C. E. Kramer, BA, MA, PhD (Chair)
K. A. Lantz, BA, MA, PhD
L. Livak, BA MA, PhD
D. Orwin, BA, MA, PhD
J. Schallert, BA, MA, MA, PhD
M. D. Tarnawsky, BA, PhD
T. Trojanowska, MA, PhD (Coordinator of Graduate Studies)
K. B. Vahamaki, BA, MA, MA, PhLic, PhD, Docent

Members Emeriti

O. Bakich, BA, MA, PhD
C. H. Bedford, BA, MA, PhD
B. B. Budurowycz, BA, MA, PhD
L. Dolezel, BA, MA, PhD, FRSC
I. Evreinov
L. Iribarne, BA, MA, PhD
R. Lindheim, BA, MA
N. Pavliuc, BA, MA, PhD
C. V. Ponomareff, BA, MA, PhD
R. D. Thomson, BA, MA, DPhil
G. Zekulin, BA, MA

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Department of Slavic Languages and Literatures
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Fax: (416) 926-2076
E-mail: Slavic@ utoronto.ca
Web: www/utoronto.ca/sIavic/

The Graduate Department of Slavic Languages and Literatures offers instruction leading to two degrees: M.A. and Ph.D.

Degree of Master of Arts

Admission Requirements

Normally, students are admitted to the Department having completed a B.A. in a cognate discipline. Four-year B.A. graduates of this University and students with equivalent qualifications from other universities may be accepted as candidates for the degree of Master of Arts. As a rule, an A- average or better in Slavic subjects taken in the third and fourth years of the B.A. program is required. All entering students are expected to demonstrate their level of proficiency in the language of their major during the first week of the session. If necessary, they may have to enrol in undergraduate language courses; these language courses do not count as part of the required graduate courses.

Program Requirements

Ordinarily, a candidate spends a full year in residence devoted to four graduate courses or, alternatively, three graduate courses and a research paper which must be written in English. All candidates majoring in one of the Slavic languages and literatures must have acquired a working knowledge of, or have completed by the end of residence an approved undergraduate course in, a Slavic language other than their major one. Most often it will be Russian. Students must satisfy departmental requirements in their major language.

Before the degree is granted, candidates must also demonstrate a reading knowledge of French or German. All M.A. candidates 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. M.A. candidates who intend to have a major or minor in Slavic Linguistics must also take SLA 1109H Studies in Old Church Slavonic. A final grade of B or better is required in all language courses.

Degree of Doctor of Philosophy

The Department of Slavic Languages and Literatures offers the following subjects as both major and minor fields:

1 Croatian and Serbian Languages and Literatures
2 Czech and Slovak Languages and Literatures
3 Polish Language and Literature
4 Russian Language and Literature
5 Slavic Linguistics
6 Ukrainian Language and Literature

Admission Requirements

Candidates for the degree of Doctor of Philosophy must have completed the M.A. in this Department with at least an A- average in their graduate courses or provide evidence of having equivalent qualifications from a recognized university. All candidates must satisfy the Department of their capacity for independent scholarly work.

Program Requirements

1 During the first two years of the Ph.D. program, students are required to take courses and to be on campus full time and consequently to participate fully in the activities of the program. Completion of all requirements, including the thesis, should take five years at the most.

2 Students are required to take the equivalent of nine full courses including at least one half-course in Slavic linguistics. Credit for not more than three full courses may be given for work done in an M.A. program. All Ph.D. candidates are required to maintain a minimum annual average of at least A- in their graduate course work. Poor performance - below a B average - in one session may result in the termination of the student's Ph.D. candidacy in the program.

3 All Ph.D. candidates majoring in one of the Slavic languages and literatures must acquire a working knowledge of, or complete by the end of their second year at least two undergraduate courses in, a Slavic language other than their major one and must satisfy departmental requirements in their major language. Candidates who do not major in Russian most often choose it as their second Slavic language.

4 Students must demonstrate reading knowledge of French or German.

5 Students majoring in Slavic linguistics must take at least three full course equivalents (FCEs) in linguistics in the Slavic department. In addition, they should take two FCEs in theoretical linguistics from cognate disciplines, e.g., linguistics, anthropology. Linguistics students are also strongly advised to complete one FCE in the literature of their major language. Students majoring in Slavic linguistics must acquire reading knowledge of French or German and complete, by the end of their second year, at least one Slavic language course from each of the three groups: West Slavic, East Slavic, and South Slavic.

6 All Ph.D. course programs in a Slavic literature must include a major and a minor. The minor should include at least two courses from any one of the six subjects listed above. Usually, candidates not majoring in Russian literature take it as their first minor.

7 After successful completion of course work and the French or German language requirement, candidates must 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.

8 By the time of their major field exam, students should have chosen their supervisor and the rest of their committee (in consultation with the supervisor).

9 Dissertation

Courses of Instruction

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: Performance/R. Bogert

SLA 1517H Modern Serbian Bards: the Orphic Tradition/R. Bogert

SLA 1520Y Bosnia in Literature and Culture: Between Croats and Serbs/ *R.* Bogert

SLA 1522Y Eros, Trauma and the Dark Identity: Desexualizing the Modern Serbian Novel/R. Bogert

SLA 1537H Political Drama from Dubrovnik to Danube/R. Bogert

SLA 1547H South Slavic Folklore/R. Bogert

Czech and Slovak Literature

SLA 1600Y Introduction to Czech and Slovak Literatures/ V. Ambros

SLA 1601Y Journeys and Home in Modern Czech Fiction/V. Ambros

SLA 1602Y Czech Style and Syntax/ V. Ambros

SLA 1604Y History of Czech Verbal Art from the Early Stages to Baroque/ V. Ambros

SLA 1605Y Of Robots, Clowns and Poets: Modern Czech Drama and Theatre/V. Ambros

SLA 1606H Public Places and Private Spaces in Czech Short Story/V. Ambros

COL 5039H Of Laughter and Forgetting in Milan Kundera/Staff

Hungarian Literature

HUN 1440Y The Modern Hungarian Novel/ Staff

HUN 1450H Hungarian Drama/Staff

HUN 1451H Three Hungarian Film Directors/ Staff

Polish Literature

SLA 1304H Staging God, Man and History: Polish Drama/T. Trojanowska
SLA 1305H Polish Fiction or a Disrupted Funeral of the Novel/ T. Trojanowska
SLA 1306H Polish Poetry: Shaping the National Canon/T. Trojanowska
SLA 1308Y Topics in Polish Literature/ T. Trojanowska
SLA 1312Y Modernism and Post-Modernism in Polish Literature/ T. Trojanowska
SLA 1331H Imagining "The Other" in Polish Literature and Culture/ T. Trojanowska

Russian Literature

SLA 1201 H Studies in the Russian Novel/ Z. Davydov
SLA 1204H Contemporary Russian Literature/ Z. Davydov
SLA 1205H Russian Literary Scandals/ Z. Davydov
SLA 1210H Studies in Medieval Russian Literature/ J. Schallert
SLA 1211Y Studies in the Russian Drama: Eighteenth to Twentieth Century/Staff
SLA 1212H Gogol/Staff
SLA 1215H Studies in Russian Literature and Criticism in the Eighteenth Century/Z. Davydov
SLA 1225H Russian Literature and Criticism in the 1860s/K. A. Lantz
SLA 1231H Twentieth Century Russian Prose I/L. Livak
SLA 1232H Russian Symbolism/L. *Livak*
SLA 1233H Studies in Modern Russian Poets/C. J. *Barnes*
SLA 1234H Oostoevsky/ D. *Orwin*
SLA 1235H Pasternak/C. J. *Barnes*
SLA 1236H Pushkin
SLA 1237H Twentieth Century Russian Prose III/L. Livak
SLA 1238H Chekhov/Staff
SLA 1239H Vladimir Nabokov's American Novels/L. *Livak*
SLA 1240H Tolstoy/D. *Orwin*
SLA 1250H Russian Journalism 1830-1860/ *Staff*
SLA 1900Y Russian Poetry (for M.A. candidates only)/C. J. *Barnes*

Slavie Linguistics

SLA 1101Y History of the Russian Language/ J. Schallert
SLA 1102Y Advanced Russian Language Skills/C. J. Barnes
SLA 1103H Comparative South Slavic Linguistics/J. Schallert
SLA 1104H Introduction to Old Church Slavonic/ J. Schallert
SLA 1105Y Structure of Russian/ C. E. Kramer
SLA 1107H Comparative West Slavic Linguistics/J. Schallert
SLA 1108H Slavic Dialectology/J. Schallert
SLA 1109H Studies in Old Church Slavonic/ J. Schallert
SLA 1110H Comparative Historical Slavic LinguisticslJ. Schallert
SLA 1112H Tense, Aspect and Mood in Slavic/C. *E. Kramer*
SLA 1141H History of the Ukrainian Language/Staff
SLA 1142H Style and Structure of Ukrainian/ *Staff*
SLA 1150H Russian Since the Revolution/ C. *E. Kramer*
SLA 1161H Areal Linguistics/C. E. Kramer

Russian Language

SLA 1101Y History of the Russian Language/ J. *Schallert*
SLA 1102Y Advanced Russian Language Skills/C. J. Barnes

Ukrainian Literature/Language

SLA 1141H History of Ukrainian Language/ Staff
SLA 1142H Style and Structure of Ukrainian/ Staff
SLA 1402Y Studies in Ukrainian Modernism/ M. Tarnawsky
SLA 1403Y Studies in Contemporary Ukrainian Literature/ T. Koznarsky
SLA 1404Y Studies in Ukrainian Poets/ T. Koznarsky
SLA 1405Y Experiments in Ukrainian Prose/ M. Tarnawsky
SLA 1406Y Studies in Ukrainian Literary Criticism/M. Tarnawsky
SLA 1407H Aspects of Literary Translation of Ukrainian/ T. Koznarsky, M. Tarnawsky
SLA 1408H Taras Shevchenko/M. Tarnawsky
SLA 1409H Ukrainian Literature of the Seventeenth and Eighteenth Centuries/M. Tarnawsky

General Slavic

SLA 1037Y Theatre and Cinema in Extremis: Staging Twentieth Century Aesthetics and Politics / V. Ambros, T. Trojanowska

SLA 1039H Kyiv-Kiev-Kijow: A City through Cultures and Centures/ T. Koznarsley

SLA 1310H Revolutions in the Theatre/ T. Trojanowska

SLA 1421H Women in East European Fiction/ T. Kirss

SLA 1521H Post-Modernity and the Mythopoetic Legacy of Mitteleuropa/R. Bogert

SLA 2000Y Reading and Research/Staff

SLA 2001H One Term Reading and Research/Staff

SLA 2002Y Reading and Research (for Ph.D. candidates only)/Staff

SLA 2020Y Research Paper/Staff

COL 5012Y Readings in Czech/Russian Literary Theory/v. Arnbrose

COL 5037H Magic Prague: Question of Literary Cityscapes/V. Ambros

Social Work SWK

Graduate Faculty

Full Members

J. Barber, BA, BSW, MSW, PHD (Dean)
M. Beiser, MD
M. C. Bogo, BA, MSW, DASW, CSW
A. Chambon, BA, MA, BSW, PhD
D. N. Dewees, BSc, LLB, BScEE, PhD
E. Fuller-Thomson, BA, BSW, MSW, PhD
U. George, BEd, BSc, MA, MA, PhD, Royal Bank Chair in Applied Social Work Research (Associate Dean)
J. Globerman, BSW, MHSc, MSc, PhD, CSW
J. D. Hutchanski, BA, MSc(PI), PhD, MCIP, Chow Yei Ching Social Work Chair in Housing
E. S. Lightman, BA, MA, PhD
M. Macadam, BA, MSc, PhD
R. J. MacFadden, BA, MSW, PhD, CSW
L. McDonald, BA, MSW, PhD
S. M. Neysmith, BSc MSW, DSW
C. Regehr, BA, MSW, PhD, Sandra Rotman Chair in Social Work
I. Rootman, BA, MPh, PhD
C. Rosenthal, BA, MA, PhD
W. Shera, BA, MA, PhD
B. Stern, BA, MSW, PhD
N. Trocme, BA, MSW, PhD
K. T. Tsang, BSocSc, MSocSc, PhD

Members Emeriti

D. F. Bellamy, MSW, DSW
M. M. Breton, BA, MSW
H. H. Irving, BS, MSW, PhD
N. C. Lang, MSW, PhD
E. A. Marziali, BA, MSW, PhD, Schipper Chair in Gerontological Social Work
D. E. Meeks, MSW, PhD
S. Olyan, MSW, PhD
B. Schlesinger, MSW, PhD
C. P. Shah, MBBS, DCH, MRCP, FRCP
B. Z. Shapiro, MSW, PhD
F. Turner, DSW, CSW
L. Wells, BA, BSW, MSW, DASW, CSW

Associate Members

R. Alaggia, BA, MSW, PHD
B. Antle, MSW, PhD, CSW
C. J. Baines, BA, BSW, MSW, PhD
L. Blakely, BA,MSW
L. Caragata, B.A., M.A., PH.D.
A. C. Caspary, BSc MSC, PH.D.
L. Davis, B.A., MA, PH.D.
F. Doctor, B.A.SC, M.S.W.
R. Eisler, BA, MSW
R. Faucher. BA. MSW. PhD
L. Fleischer, MSW, PhD
B. M. Frolic, B.A., PH.D.
L. A. Gillies, BA, MA, PhD
N. Gold, BA, MSW, PhD
K. Goldenberg, BA, BE, MA, MSW
M. Herie, BA, MSW, PH.D
A. Ickowicz, F.R.C.P., M.D.
J. J. Jeffries, MA, MB, B.CH, B.A.O, F.R.C.P.C, M.R.C. PSY
J. King, BA, MSW
W. Lee, BA, MSW, AdvDipSW, DipEd
D. Levine
G. Lipson, BS, MS, PHD
A. Litvack, BSW, MSW, CSW
W. Martin
L. McCleary, BA, MA, DR.
S. McGrath, BA, MES, PHD
T. Mcneill, BA, MSW, PH.D.
H. R. Meier, MB, ChB, MSc, FRCPsych, FRCPC
F. Mishna, MSW, PhD, CSW
K. Moffatt, BES, MSW, PHD
M. Monahan, BA, MSW, PH.D
T. Myers, BA, MSc, MSW, PhD
P. Newman, BA, MSW, PHD
D. Nicholas, MSW, PhD
S. Novac, BA, MES, PhD
D. Offord, MDCN, FRCP, FAPA
R. M. Power, BA, BSW, MSW
S. Reid, BASc, MA, PHD
K. Richard, BSW, MSW
R. Roberts, MSW, DASW, EdD, ResDipSW, CSW
I. Sakarnoto, BA MA, MSW, MS, PhD
A. Shlonsky, BA MSW, MPH, Ph.D., Director, Bell Canada Child Welfare Centre
W. J. Skinner, BA, MSW
M. Stewart, BA, MSW, PhD
J. Sudbury, BA, MA, Ph.D, CRC Chair in Social Justice, Equity & Diversity
R. Todres, BA, MSW, PhD
S. Urman
C. Williams, BSc, BA, MSW, PhD

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INTRODUCTION

The Faculty of Social Work offers a professional/academic program of study leading to a Master of Social Work (M.S.W.) degree and a post-master's program leading to a Doctor of Philosophy (Ph.D.) degree.

The M.S.W. program is fully accredited as a professional program by the Canadian Association of Schools of Social Work (C.A.S.S.W.).

The Faculty of Social Work promotes social justice and equity through interdisciplinary knowledge building and education for practice in social work and social welfare. The Faculty of Social Work provides leadership for excellence in:

- the development and testing of new knowledge that will have an impact on social policy and social work practice at all levels;
- social work education that will prepare graduates for ethical, competent, innovative and effective social work practice;
- the development of social policy and social work practice at all levels;
- maintaining an academic environment and promoting social work practice grounded in social justice and equal opportunity for all groups in society irrespective of gender, ethnic origin, race, native heritage, language, religious beliefs, class, sexual orientation, disability, age, culture, or any other forms of diversity.

The Faculty of Social Work is distinguished by its special emphasis on the integration of research and practice; by its partnerships with community agencies; by its identification of special themes, which are responsive to societal needs, to guide it in setting priorities; and by its governing structure that brings together teaching faculty, field instructors, students, alumni, the profession, the administration, and the University as partners in the realization of the Faculty's mission.

Social Work practice encompasses all levels of practice (with individuals, families, groups, communities, organizations, and policy); the Faculty of Social Work is committed to the interdependence and effectiveness of these levels of practice as contributing to social justice and social change. For further details, visit the Faculty Web site.

Interdisciplinary Programs

The Faculty of Social Work offers two types of interdisciplinary programs: combined degree programs and collaborative programs.

Combined Degree Programs

1 Combined Juris Doctor and Master of Social Work Program
2 Combined Master of Health Science and Master of Social Work Program

Collaborative Programs

1 Addiction Studies
2 Aging and the Life Course
3 Community Development
4 Ethnic and Pluralism Studies
5 Health Care, Technology and Place
6 Health Services and Policy Research
7 South Asian Studies
8 Women's Studies

Application and Admission

All students are admitted to the Faculty of Social Work under the general regulations and in accordance with the requirements listed below. Enrolment in the Faculty of Social Work entails adherence to the standards of professional behaviour for the Social Work profession set forth in the Social Work Code of Ethics of the Canadian Association of Social Workers.

Initial admission enquiries should be made directly to the Faculty of Social Work. The application deadline for the M.S.W. program is ***December 15***. The application deadline for the Ph.D. program is ***February 7***. The Faculty of Social Work cannot guarantee the admission of all applicants who meet its minimum requirements.

DEGREE OF MASTER OF SOCIAL WORK

Streams

The Faculty of Social Work offers two streams in the Master of Social Work Program.

1 Candidates entering with a four-year bachelor's degree from a recognized university will normally complete the program in two years of full-time study.

2 Candidates 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.

Goals

To prepare graduates:

1 for ethical, innovative, and effective social work practice in a diverse society;

2 to work actively to promote social justice, make professional decisions, and perform professional functions that are informed by an understanding of the political context of practice;

3 for competent practice which integrates theory and research;
4 capable of integrating practice and policy;
5 who have a generic foundation of core social work knowledge, values and skills, applicable to all fields and methods of practice; and
6 for practice in specialized areas, defined by student interest, faculty expertise, and demand from the field.

Objectives
1 To prepare students for professional practice according to the accreditation standards of CASSW.
2 To prepare students for social work practice interventions based on research evidence.
3 To prepare students for specialized practice in four identified areas:
a children and their families,
b diversity and social justice,
c mental health and health,
d social work in gerontology.
4 To strengthen our partnerships with social work agencies in areas of particular interest to the Faculty for the purposes of enriching our curriculum and of producing graduates with the requisite skills to function in those agencies.
5 To encourage interdisciplinary linkages.

Admission Requirements
1 Candidates for admission to the two-year M.S. W. Full-time Program normally shall have graduated with a four-year bachelor's degree, or equivalent from the University of Toronto or an approved university, and normally shall have achieved a mid-B average in each of the last two years of full-time study (or equivalent).
2 Candidates for admission to the M.S.W. Program with Advanced Standing shall have graduated with a Bachelor of Social Work (B.S.W.) degree from a recognized university, and normally shall have achieved a mid-B average in each of the last two years of full-time study (or equivalent).
3 All applicants must have completed satisfactorily at least three full courses, or their equivalent, in the social sciences to include a half-credit course in research methodology, preferably in the social sciences. A grade less than mid-B in the required half-credit course in research methodology will lessen the applicant's probability of admission.
4 Experience (voluntary or paid) in the social services and knowledge of critical social issues are recommended. Suitability for professional practice will also be considered.
5 Candidates must show evidence of facility in the English language (see SGS General Regulations).
6 Candidates for the M.S.W. ***Program with Advanced Standing*** (students entering with a B.S.W. degree) must indicate on the M.S.W. Program Application Form:
a an area of specialization,
b a preference for full-time or part-time studies,

Note: Due to space limitations, applicants holding the minimum admission requirements are not guaranteed admission. The Faculty reserves the right to select the qualified applicants it will admit to the program. All decisions are final.

Program Requirements
Two-Year M.S.W. Full-time Program
(for candidates entering with a B.A. or B.Sc. or equivalent)
1 Degree requirements are normally completed within two calendar years. The maximum time limit for completing M.S.W. degree requirements is four years from the date of first registration in the program.
2 The program of study consists of the equivalent of 17 half-credit courses, except in the Gerontology specialization where the requirement is 18 half-credit courses. All students enrolled in the Social Work and Gerontology specialization will automatically be enrolled in the Collaborative Program in Aging and the Life Course.
a Students take 12 required half-credit courses and a minimum of 2 half-credit course electives over the two-year program. In the Gerontology specialization, students take 13 required half-credit courses and two half-credit course electives.
b The practica requirement is equivalent to three half-credit courses. The first year practicum offered in the winter session (January-May) of the first year is equivalent to a half-credit course; the second year practicum (September-April) is equivalent to two half-credit courses and must be in the student's area of specialization.
c Students who have been approved to complete a thesis in place of the two half-credit course electives take an additional half-credit research methods course (SWK 6307H Designing and Implementing Qualitative Social Work Research or SWK 6308H Designing and Implementing Quantitative Social Work Research). The thesis requirement is equivalent to two half-credit courses. This option is open to a limited number of students, and is subject to faculty availability.
3 Students are required to be on campus regularly, that is, reside close enough to participate fully in the university activities

associated with the program. Residence and full-time are defined in the SGS General Regulations.

Program of Study
Two-Year M.S.W. Full-time Program
(for candidates entering with a B.A. or B.Sc. or equivalent)
The total course load for the Two-Year M.S.W. Full-time Program is equivalent to 17 half-credit courses; for the Gerontology specialization it is 18 half-credit courses.

Year One
Total Course Load: Equivalent to 9 Half–Credit Courses

SWK 4102H Social Policy and Social Welfare in the Canadian Context
SWK 4103H Elements of Social Work Practice
SWK 4105H Social Work Practice Laboratory
SWK 4107H Foundations of Social Work: Knowledge, Theory and Values that Inform Practice
SWK 4510H Research for Evidence-Based Social Work Practice
SWK 4602H Social Work Practice with Groups
SWK 4605H Social Work Practice with Individuals and Families
SWK 4654H Social Work Practice in Organizations and Communities
SWK 4701H Social Work Practicum I

Year Two
Students choose one of four specializations. Two-year stream students must declare their specializations by mid-February of the first year.
1 Children and Their Families
2 Diversity and Social Justice
3 Mental Health and Health
4 Social Work in Gerontology
The first three specializations have four required half-credit courses, two elective half-credit courses, and a full-year practicum. The Gerontology specialization has five required half-credit courses, two elective half-credit courses, and a full-year practicum.

Specialization: Children and their Families
Total Course Load: Equivalent to 8 Half–Credit 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)
Two elective half-credit courses

Specialization: Diversity and Social Justice
Total Course Load: Equivalent to 8 Half–Credit Courses

SWK 4304H Globalization and Trans-nationalization: Social Work Responses Locally and Globally
SWK 4306H Process of Social Exclusion, Marginalization, and Resistance
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)
Two elective half-credit courses

Specialization: Mental Health and Health
Total Course Load: Equivalent to 8 Half–Credit Courses

SWK 4412H The Context of Mental Health and Health Practice
SWK 4511H Practice-Based Research in Mental Health and Health
SWK 4604H Social Work Practice in Mental Health
SWK 4622H Social Work Practice in Health
SWK 4702Y Social Work Practicum II (full-credit)
Two elective half-credit courses

Specialization: Social Work in Gerontology
Total Course Load: Equivalent to 9 Half-Credit Courses

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)
Two elective half-credit courses

M.S.W. Thesis (Optional)

M.S.W. Thesis Option: all Specializations except Gerontology
Total Course Load: Equivalent to 9 Half-Credit Courses

The M.S.W. thesis (equivalent to two half-credit courses) provides actual hands-on research experience. The thesis must be an independent piece of research. The major purpose of the thesis is to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. The number of students permitted to exercise this option is subject to faculty availability. Students who have been approved to undertake a thesis must complete SWK6307H Designing and Implementing Qualitative Social Work Research or SWK6308H Designing and Implementing Quantitative Social Work Research in addition to the required courses in the selected specialization, but are exempted from taking the two elective half-credit courses.

M. S. W. Thesis Option: Gerontology Specialization
Total Course Load: Equivalent to 9 Half-Credit Courses

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
Two elective half-credit courses, one of which must be from the Collaborative Program in Aging and the Life Course listing
Thesis (equivalent to two half-credit courses)

Program Requirements
M.S.W. Program with Advanced Standing
(for candidates entering with a B.S.W. degree)
1 Students may complete the degree program either full-time or part-time. Students enrolling in the program part-time must meet the same degree requirements and complete the same number of credits as the full-time students, although the structure and sequencing of their individual programs of study may vary.
2 Full-time students normally complete the program over three academic sessions (September to June). Part-time students normally complete requirements within two years. The maximum time limit for completing degree requirements is four years from the date of first registration in the program.
3 The program of study consists of an equivalent of nine half-credit courses; ten half-credit courses in the Gerontology specialization. All students enrolled in the Social Work and Gerontology specialization will automatically be enrolled in the Collaborative Program in Aging and the Life Course.
a Students must take five required half-credit courses and a minimum of two elective half-credit courses.
b A practicum is required, equivalent to two half-credit courses. The practicum (which is unpaid) must be in the student's area of specialization. For students enrolled in the full-time program, the practicum is completed from September to April. For students enrolled in the part-time program the practicum is designed to commence as a 16-week block starting in April in the Greater Toronto Area. Exceptions to a block summer practicum must be negotiated in advance with the Practicum Office.
c Students who have been approved to complete a thesis in place of the two elective half-credit courses take one additional half-credit research methods course (SWK 6307H Designing and Implementing Qualitative Social Work Research or SWK 6308H Designing and Implementing Quantitative Social Work Research). Students choosing this option may require additional time to complete their programs. This option is open to a limited number of students and is subject to faculty availability.

Program of Study
M.S.W. *Program with Advanced Standing*
(for candidates entering with a *B.S.W.* degree)
1 The M.S.W. Program with Advanced Standing is designed for students with a B.S.W. degree. It aims to prepare students with an advanced level of knowledge and professional competence in a chosen area of social work practice. The program combines the dual purposes of graduate education and professional training. It is believed that a rigorous academic education supports competent and ethical professional practice at an advanced level.
2 Students choose one of four specializations. Advanced standing students will declare their specializations on the M.S.W. Application form by December 15.
a Children and Their Families
b Diversity and Social Justice
c Mental Health and Health

d Social Work in Gerontology

The first three specializations have five required half-credit courses, two elective half-credit courses, and a full-year practicum. The Genrontology specialization has six required half-credit course equivalents, two elective half-credit courses, and a full-year practicum.

3 A variety of educational approaches are used to deliver curriculum content and to provide stimulating and integrative learning experiences. Students participate in regularly scheduled classes in a variety of formats (lectures, group discussions, seminars, etc.), a field-based practicum, and research projects.

Courses of Instruction

Students complete one of the following four specializations:

Specialization: Children and their Families
Total Course Load: Equivalent to 9 Half-Credit Courses

SWK 4510H Research for Evidence-Based Social Work Practice
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)
Two elective half-credit courses

Specialization: Diversity and Social Justice
Total Course Load: Equivalent to 9 Half–Credit Courses

SWK 4304H Globalization and Transnationalization: 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 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)
Two elective half-credit courses

Specialization: Mental Health and Health
Total Course Load: Equivalent to 9 Half–Credit Courses

SWK 4412H The Context of Mental Health and Health Practice
SWK 4510H Research for Evidence-Based Social Work Practice
SWK 4511H Practice-Based Research in Mental Health and Health
SWK 4604H Social Work Practice in Mental Health
SWK 4622H Social Work Practice in Health
SWK 4702Y Social Work Practicum II (full-credit)
Two elective half-credit courses

Specialization: Social Work in Gerontology
Total Course Load: Equivalent to 10 Half-Credit Courses

AGE 2000H Principles of Aging
SWK 4510H Research for Evidence-Based Social Work Practice
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)
Two elective half-credit courses, one of which must be from the Collaborative Program in Aging and the Life Course listing

M.S. W. Thesis (Optional)

M.S.W. Thesis Option: all Specializations except Gerontology
Total Course Load: Equivalent to 10 Half-Credit Courses

The M.S.W. thesis (equivalent to two half-credit courses) provides actual hands-on research experience. The thesis must be an independent piece of research. The major purpose of the thesis is to enable students to develop and apply research skills within the context of social work practice and to write a graduate thesis of publishable quality. The number of students permitted to exercise this option is subject to faculty availability. Students who have been approved to undertake a thesis must complete SWK6307H *Designing and Implementing Qualitative Social Work Research* or

SWK6308H Designing and Implementing Quantitative Social Work Research in addition to the required courses in the selected specialization, but are exempted from taking the two elective half-credit courses.

M. S. W. Thesis Option: Gerontology Specialization
Total Course Load: Equivalent to 10 Half-Credit Courses

AGE 2000H Principles of Aging
SWK 4510H Research for Evidence-Based Social Work Practice
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
Two elective half-credit courses, one of which must be from the Collaborative Program in Aging and the Life Course listing
Thesis (equivalent to two half-credit courses)

Elective Courses
Courses are offered in various areas of social work practice. The choice of electives in any given year is contingent on available faculty resources, Not every course is given in any one year. Please consult the Faculty, admissions application materials, or the Faculty Web site www.socialwork.utoronto.ca.

AGE 2000H Principles of Aging
JPX 1001H Parenting: Multidisciplinary Perspectives/N. Trocme, Staff
JPW 2118H Philosophical Foundations of Women's Studies
JTH 3000H Coordinating Seminar in Ethnic and Pluralism Studies
PAS 3700H Multidisciplinary Aspects of Addiction Studies/M.J. Ashley, Staff
SWK 4210H Promoting Empowerment: Working at the Margins/Staff
SWK 4403H Women and Social Policy in Canada/S. Neysmith
SWK 4417H Adolescence: Social Work Challenges and the Role of Social Work/R Roberts
SWK 4420H Human Rights and Social Justice/Staff
SWK 4422H Social Housing and Homelessness/J.D. Hulchanski
SWK 4506H Applied Quantitative Data Analysis/Staff
SWK 4603H Advanced Social Work Practice with Groups/Staff
Prerequisite: SWK 4602H or equivalent
SWK 4609H Sexuality, Sexual Diversity and Social Work Practice/Sfaff
SWK 4610H Advanced Social Work Practice with Couples/M. C. Bogo, R. J. MacFadden
SWK 4613H Social Work Practice with the Aged/Sfaff
SWK 4616H Drug Dependencies: Interventive Approaches/Staff
SWK 4617H Cross-Cultural Social Work Practice/A. K. T. Tsang, K. Richard, I. Sakamofo
SWK 4619H Family Mediation: Theory and Practice/H. H. Irving, A. Litvack
SWK 4621H Integrative Child and Adolescent Therapy: Theory and Practicel A. Caspary
SWK 4623H Violence in Families: Multilevel Intervention in Interdisciplinary Practice/ R. Roberts
SWK 4624H Feminist Social Work Practicel Staff
SWK 4630H Intersecting Narratives: Self, Culture, Institutions/A. Chambon
SWK 4658H Social Work with Immigrants and Refugees/U. G. George, Staff
SWK 4662H Social Policy Analysis/E. Lightman
SWK 4663H Social Planning Approaches and Issues/ J. D. Hulchanski
SWK 4664H Administrative/Managerial Practice in Social Work/P.L. McDonald, C. Regehr
SWK 4667H Information Technology in Professional Social Work Practice/R. MacFadden
SWK 4668H Welfare of Children: Policy and Practice/N. Trocme

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

DEGREE OF DOCTOR OF PHILOSOPHY

Admission Requirements

Candidates must have:

1 a degree of Master of Social Work or an equivalent master's degree with at least B+ standing from an accredited program in a recognized university;

2 competency in basic statistical methods at an introductory level (an introductory statistics course is offered in the first session of the program to ensure that students meet this prerequisite);

3 educational and professional experience that will indicate a capacity to undertake research-oriented postgraduate work.

4 Candidates must show evidence of facility in the English language (See SGS General Regulations).

Candidates are accepted for admission based on an assessment of their ability to complete the academic requirements of the program. Experience and professional achievements are considered, although greatest weight is placed on demonstrated academic performance.

Program Requirements

The Faculty of Social Work Doctor of Philosophy program is structured to support completion of all degree requirements within a period of four years. The program is available on a full-time basis only.

1 Candidates for the degree of Doctor of Philosophy shall normally complete at least ten half-credit courses, or their equivalent, within the first two years, including:

a Required research courses:

SWK 6301H Intermediate Statistics and Data Analysis (all incoming doctoral candidates are required to take SWK 4506H as a prerequisite or pass an equivalent competency exam with a grade of at least B+)

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

Note: Candidates who demonstrate competency may be exempted from the above required research courses. The course instructor will determine competency. Candidates will substitute an alternate elective course for each exempted course. Transcripts will note exemptions from the required courses.

b Five graduate elective half-credit courses are chosen by the candidate, at least one of which is taken at the Faculty of Social Work, and at least one of which is taken in another graduate unit at the University of Toronto.

c The half-credit course SWK 7000H *Doctoral Thesis Seminar (Credit/No Credit)* is required during the fall session of the second year of the program.

2 Following completion of course work, candidates are required to satisfactorily complete a comprehensive paper.

3 Following completion of the comprehensive paper, candidates propose and complete a thesis which shall constitute a distinct contribution to knowledge in the field of social work. The thesis must be based on research conducted while registered for the Ph.D. program. Copies of the completed thesis must be submitted to the external appraiser at least six weeks, and preferably earlier, in advance of the candidate's final oral examination. The candidate must successfully defend the thesis at a final oral examination. Detailed information regarding the final oral examination and publication of the thesis may be found in the Degree Regulations section of this calendar.

Time Frame: Candidates are encouraged to complete and obtain Thesis Committee approval of their thesis proposal by August of the second year of the program. The research, writing, and oral examination of the thesis is typically completed by the end of the fourth year of the program.

4 Candidates must have an adequate knowledge of a language other than English if an additional language is deemed essential for satisfactory completion of research for the thesis. The Faculty is responsible for ensuring that an acceptable certificate of language competence is deposited with the School of Graduate Studies.

5 Candidates are expected to be available on a full-time basis during the first two years (six consecutive sessions) of the program in order to complete the equivalent of ten half-credit courses. During subsequent years, candidates may elect to be off campus to conduct their research and to write the thesis. Candidates are required to register for each successive fall session on a full-time basis following their first session of registration unless granted a leave of absence. The minimum period of registration in each academic year is three consecutive sessions. Candidates who elect to be off campus in the third and subsequent years of the program must be available on campus for regular meetings with their thesis committee.

6 Candidates must complete the requirements for the degree within six years following admission to the program.

Courses of Instruction

The following courses are offered in the doctoral program. Some courses are given in conjunction with the M.S.W. curriculum. Course offerings in any year depend on student interest and Faculty resources.

SWK 6005H Theoretical Foundations of Social Work/Staff
SWK 6006H Theory and Practice of Teaching Social Work/M. Bogo
SWK 6101H Critical Evaluation of Social Work Practice Theories/Staff
SWK 6106H Family Mediation: Research and PracticelH. H. Irving
SWK 6203H Comparative Social Welfare Systemslstaff
SWK 6205H Social Planning in Social Welfare/J. D. Hulchanski
SWK 6208H Advanced Principles of Social Policy Analysis/E.S. Lightman
SWK 6301H Intermediate Statistics and Data Analysis/E. Fuller-Thomson
SWK 6302H Epistemology and Social Work Research/P. L. McDonald
SWK 6303H Evaluation Research and the Assessment of Social Programs/Staff
SWK 6307H Designing and Implementing Qualitative Social Work Research/Staff
SWK 6308H Designing and Implementing Quantitative Social Work Research/Staff
SWK 6309H Clinical Research Design Methods/Staff
SWK 6401H Sociocultural Issues in Social Work/A. K. T: Tsang
SWK 6406H Housing Theory and Research Methods/J. D. Hulchanski
SWK 7000H Doctoral Thesis Seminar (Credit/No Credit)/A. S. Chambon

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

INTERDISCIPLINARY PROGRAMS

Combined J.D./M.S.W. Program

For students who wish to practice in the areas where law and social work interact (for example, child welfare, juvenile and criminal justice, dispute resolution, mental health, and family law) this combined interdisciplinary program leads to both the Juris Doctor and Master of Social Work degrees.

The program allows students to complete the two degrees in four years, rather than the five it would take to pursue the two independently. Students who enter with a B.S.W. will be given advanced standing. Admission to the combined program is conditional upon the applicant meeting the admission requirements of each of the Faculties.

Combined M.H.Sc./M.S.W. Program

With the community focus in health care, there is a greater need for linkages between health and social services. The interdisciplinary Program of Social Work and Health Policy, Management and Evaluation provides background for students wishing to move into administrative leadership in social work and health organizations. The program allows students to complete both degrees in three years, rather than the four it would take to pursue the two independently.

Students entering with a B.S.W. degree will be given advanced standing. Admission to the combined program is conditional upon the applicant meeting the admission requirements of each of the graduate units.

Addiction Studies (Collaborative Program)

The purpose of this program is to develop and integrate graduate training in the multidisciplinary field of addictions, an area that includes the use and abuse of substances, as well as gambling and other addictive behaviours.

This program is open to both M.S.W. and Ph.D. students. For details, consult the Addiction Studies (Collaborative Program) entry in this calendar.

Aging and the Life Course (Collaborative Program)

This program prepares students for specialization in the field of aging, a field that includes individual human aging and population aging, with an emphasis on viewing aging issues within the perspective of the life course.

This program is open to both M.S.W. and Ph.D. students. For details, consult the Aging and the Life Course (Collaborative Program) entry in this calendar.

Community Development (Collaborative Program)
Community development is the study of change in the social, economic, organizational, or physical structures of a community that seeks to improve both the welfare of community members and the community's ability to control its future.

This program is open to M.S.W. students. For further details, see the Community Development (Collaborative Program) entry in this calendar.

Ethnic and Pluralism Studies (Collaborative Program)
This program bridges perspectives of anthropology, economics, geography, history, industrial relations, nursing, political science, sociology, social work, and religion to provide an in-depth understanding of ethnic differences and processes among groups at the micro and macro levels.

This program is open to both M.S.W. and Ph.D. students. For further details, see the Ethnic and Pluralism Studies (Collaborative Program) entry in this calendar.

Health Care, Technology and Place (Collaborative Program)
This program is an interdisciplinary initiative designed to develop innovative research approaches needed to respond to the spatial, technological, and social shifts in health care.

This program is open to Ph.D. students. For further details, consult the Health Care, Technology and Place (Collaborative Program) entry in this calendar.

Health Services and Policy Research (Collaborative Program)
Specific program objectives include:
1 providing training in health services research for graduate students,
2 enhancing the quality and breadth of transdisciplinary training in health services research, and
3 including decision makers as active partners in teaching, program and curriculum planning, and the provision of field placements for students.

The competency based program focuses on five areas:
1 understanding the Canadian health care system,
2 ability to carry out health services research,
3 understanding theories regarding the way the health of populations is produced,
4 understanding theories of health and health services knowledge production, and
5 knowledge exchange and development of research partnerships.

This program is open to both M.S.W. and Ph.D. students. For further details, see the Health Services and Policy Research (Collaborative Program) entry in this calendar.

South Asian Studies (Collaborative Program)
This program provides students with an understanding of ancient and modern history, social change, economic development, contemporary politics, religious traditions, and a spectrum of related topics.

As part of the degree requirements, M.S.W. students take an interdisciplinary core course entitled Issues in South Asian Studies, attend visiting lecture series organized by the Centre, and focus their thesis proposal in this area. For details, consult the South Asian Studies (Collaborative Program) entry in this calendar.

Women's Studies (Collaborative Program)
This program is designed to create and support an integrated, interdisciplinary research community for students and faculty to collaborate in the creation and critical development of new knowledge and methodologies emerging in the field of women's studies.

This program is open to both M.S.W. and Ph.D. students. For details, see the Women's Studies (Collaborative Program) entry in this calendar.

Sociology SOC

Graduate Faculty

Full Members

B. Baldus, MA, DrScPol
D. Behrens, HBA, MS, PhD
J. R. Blickstead, BA, MA
M. Blute, BA, MA, PhD
Y. M. Bodemann, MA, PhD
M. Boyd, BA, MA, PhD, Canada Research Chair
D. Brownfield, PhD
J. M. Bryant, BA, MA, PhD
R. J. Brym, BA, MA, PhD
L. M. Calzavara, BA, MA, PhD
M. E. Eichler, MA, LLD, PhD
B. H. Erickson, BA, MA, PhD
P. G. Erickson, BA, MA, PhD
E. Fong, BA, MA, PhD
B. J. Fox, AB, PhD
H. B. Friedmann, AB, MA, PhD
R. I. Gartner, BA, MS, PhD
A. R. Gillis, BA, MA, PhD
J. L. Hagan, BA, MA, PhD, FRSC, University Professor
M. F. Hammond, BA, MA, MPh, PhD
K. Hannah-Moffat, BA, MA, PhD
J. A. Hannigan, BA, MA, PhD
E. B. Harvey, BA, MA, PhD
N. Howell, BA, PhD
P. C. Hsiung, BA, MA, PhD
C. L. Jones, BA, MA, PhD
J. B. Kervin, BA, PhD
D. W. Livingstone, BA, PhD
R. W. Mackay, BA, MA, PhD
W. Magee, BA, MS, PhD
D. W. Magill, BA, MA, PhD
V. W. Marshall, BA, MA, PhD
W. Michelson, AB, AM, PhD, FRSC, S.D. Clark Chair in Sociology
J. Myles, BA, BT, MA, PhD, Canada Research Chair
R. O'Toole, BA, MA, PhD
J. G. Reitz, BS, PhD, FRSC, Robert F. Harney Professor of Ethnic Immigration and Pluralism Studies
R. Roman, BA, MA, PhD
J. W. Salaff, BA, MA, PhD
A. Sev'er, BA, MA, PhD
E. Single, BA, PhD
A. Sorenson, BA, MA, PhD
J. Tanner, BSc MA, PhD
J. Taylor, BA, PhD
L. J. Tepperman, BA, MA, PhD
S. B. Ungar, BA, MA, PhD
J. Veugelers, BA, MA, PhD
B. S. Welhan, BA, MA, PhD
S. Welsh, BA, MA, PhD (Coordinator of Graduate Studies)
B. Wheaton, BA, MA, PhD (Chair)

Members Emeriti

R. Breton, MA, PhD, FRSC(SM)
D. Campbell, BA, MA, PhD
W. W. ISajiw, BA MA, PhD
E. T. Silva, BA, MA, PhD
J. H. Simpson, BA, BD, MTh, PhD
M. W. Spencer, MA, PhD
I. M. Zeitlin, BA, MA, PhD

Associate Members

S. Abraham, BA, MA, PhD
S. Baumann
B. Berry, BA, PhD
C. Cranford, MA,PHD
J. Hermer, BA, MA, DPhil
J. Johnston, BA,MA,PHD
A. Korteweg, BA, MA,PHD
P. Landolt
G. Moore, BSc, BLS, MLS, PhD
P. Maurutto, PHD
I. Peng, BA, BSW, MA, PhD
S. Schieman, BA, MA, PhD
J. Wayne, BA, MA, PhD
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General Information on Applications

Candidates are admitted under the general regulations of the School of Graduate Studies. Application information and links for downloading application forms are found on the department's Web site. Admission decisions are based on grades and indications of superior qualifications such as letters of recommendation and a sample of the applicant's work. Applicants must submit the following directly to the Department:

1 Two letters of reference from instructors or research supervisors:

2 A paper, including summary, which the student feels represents his or her best work;

3 A one-page typed statement of interest indicating research interests and reasons for applying to study Sociology at the University of Toronto.

Degree of Master of Arts

Admission Requirements

An overall B+ average in each of the last two years of post-secondary education qualifies an applicant for consideration. Applicants must have taken at least the equivalent of five full-year courses in Sociology and have a four-year B.A. or its equivalent. Applicants are also expected to have acquired basic research and statistical skills. Those with excellent grades but whose preparation is insufficient will be required to take additional courses.

Program Requirements

The M.A. 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.

Students have the option of completing the master's degree in one of two ways:

1 by completing 8 half-courses within 9 months (the preferred option for those proceeding to the Ph.D.) or

2 by completing 6 half-courses and a research paper within 12 months.

All master's students must take:

SOC 6001H Classical Sociological Theory
SOC 6303H Field Methods.

Students who choose the course-work M.A. must also take:

SOC 6302H Social Statistics.

Students who choose the research paper option must also take:

SOC 6301H Survey Methods.

The choice of courses in all programs must be approved by the Department. Students must maintain a B average to be recommended for the M.A. degree.

Degree of Doctor of Philosophy

Admission Requirements

Students are usually admitted to the Ph.D. program after completing the M.A. or its equivalent, with at least an A- standing. All students must demonstrate that their M.A., or equivalent, includes course work equivalent to Classical Social Theory, Social Statistics, and Field Methods. Some students may be required to take prescribed additional courses.

The Department may recommend admission directly after completion of a four year B.A. degree. Direct entry of this kind will only be recommended for outstanding students who have provided a clear and detailed plan for thesis research. Students who enter the doctoral program directly from a four-year B.A. will be required to take the three half-courses that are required at the M.A. level in addition to the standard Ph.D. requirements.

Program Requirements

Minimal requirements for this degree:

1 Two years of residence.

2 Eight half-year courses. These must include:

SOC 6710H Logic of Social Inquiry
SOC 6101H Contemporary Sociological Theory
SOC 6707H Intermediate Data Analysis
SOC 6711Y Research Practicum (A full-course counts as two half-courses.)

If a student has already taken these courses at the graduate level, other courses will be substituted to maintain the eight half-course total.

3 Two comprehensive examinations. For details see the Department's Graduate Handbook and Manual. These comprehensives must be completed by the end of the second year of residence.

4 Preparation of an original thesis, under the supervision of a committee of the faculty staff, and its oral defense.

5 Candidates must have an adequate knowledge of a language other than English if an additional language is deemed essential for satisfactory completion of research for the thesis.

An average of at least B+ is required in order to be eligible to continue in the following year of any program. Failure in any course (that is, less than a B-) will require a review of the student's total program by the Department.

Checkpoints for Doctoral Students

Checkpoint	Desirable Completion	Acceptable Completion
Field of thesis research and name of supervisor submitted	6 months	9 months
Eight graduate half-courses completed	9 months	15 months
Working thesis topic submitted	9 months	12 months
Both comprehensives completed	18 months	2 years

Research Proposal, Ethical Review, and Language Examination	18 months	2.5 years
Thesis Prospectus accepted by the supervisor	2.5 years	3 years
Final Oral Examination	4 years	5 years

This model timetable is necessarily a rough one and may be altered to take account of leave granted for special personal circumstances. It would be extended by up to nine months for students who were required to make up required M.A. courses in Classical Social Theory, Field Methods, or Statistics. The checkpoints outlined are feasible, and while there are no automatic penalties levied on a student who fails to meet them, inability to keep pace raises questions about the student's suitability for the program.

Collaborative Programs

The Department of Sociology is involved in the following collaborative programs. Consult the separate entries in this calendar for details.

1 Addiction Studies
2 Aging and the Life Course
3 Asia-Pacific Studies
4 Environmental Studies
5 Ethnic and Pluralism Studies
6 International Relations
7 Jewish Studies
8 Knowledge Media Design
9 Women's Studies

Courses of Instruction

For details on course offerings check with departmental Graduate Office.

Social Inequalify

SOC 6002H Immigration I
SOC 6003H Immigration II
SOC 6009H Ethnicity I
SOC 6109H Ethnicity II
SOC 6012H Sociology of Work I
SOC 6112H Sociology of Work II
SOC 6019H Gender Relations I
SOC 6119H Gender Relations II
SOC 6125H Theories of Social Change
SOC 6126H The Social Ecology of Health

Social Organization

SOC 6010H Political Sociology I
SOC 6110H Political Sociology II
SOC 6013H Social Inequality I
SOC 6113H Social Inequality II
SOC 6017H Sociology of Families I
SOC 6117H Sociology of Families II
SOC 6018H Sociology of Religion I
SOC 6118H Sociology of Religion II
SOC 6124H The Life Course in Modern Society
SOC 6214H Sociology of Urbanization
SOC 6314H Community
SOC 6414H Urban Organization
SOC 6514H Social Ecology
SOC 6516H Sociology of Culture

Social Order

CRI 3140H Special Topics in Criminology/ R. I. Gartner (course enrolment limited to 20 students)
SOC 6006H Deviance I
SOC 6106H Deviance II
SOC 6206H The Sociology of Deviance and Control
SOC 6306H Sociology of Law (Law 279H)
SOC 6506H Design and Analysis of Research on Deviance and Control
SOC 6606H Evaluation of Selected Control Policies (also LAW 256H)
SOC 6022H Sociology of Health
SOC 6023H Sociology of Mental Health I
SOC 6122H Sociology of Mental Health II
SOC 6123H Sociology of Addiction

Modes of Social Inquiry

JPD 2037Y Post-Modern and Contemporary Thought
SOC 6001H Sociological Theory I
SOC 6101H Sociological Theory II
SOC 6201H Sociological Theory Ill
SOC 6008H Network Analysis I
SOC 6108H Network Analysis II
SOC 6016H Social Demography I
SOC 6116H Social Demography II
SOC 6021Y Sociology and the Policy Process in Canada
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

Social and Technological Change

SOC 6005H Social Change and Development I
SOC 6105H Social Change and Development II
SOC 6014H Environmental Sociology I
SOC 6114H Environmental Sociology II
SOC 6312H Social Aspects of Technology and Work

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

M.A. Research Paper

SOC 6215Y M. A. Research Paper

Sociology and Equity Studies in Education SES

Graduate Faculty

Full Members

S. S. Acker, BA, MA, PhD
N. Belanger, BA, MA, PhD
K. Bickmore, BA, MA, PhD
K. Dehli, BA, MA, PhD (Associate Chair)
G. Dei, BA, MA, PhD (Chair)
M. E. Eichler, MA, LLD, PhD
R. Folson, PhD
M. Fullan, BA, MA, PhD
J. Gaskell, BA, EdD
M. S. Heller, BA, MA, PhD
J. Hladki
P. C. Hsiung, BA, MA, PhD
P. I. Idahosa
J. Iseke-Barnes, PhD
J. Larkin
B. Lawrence
H. I. Lenskyj, BA, MA, PhD
O. W. Livingstone, BA, PhD
L. Marks
A. Mullen
C. P. Olson, BA, MA
J. E. Quarter, BA, MA, PhD
S. H. Razack, BA, MA, PhD
K. Rockhill, BS, PhD
W. Seccombe
R. I. Simon, BS, PhD
A. Trotz, BA, MPhil, PhD
J. Zine

Members Emeriti

E. B. Harvey, BA, MA, PhD
L. R. Pierson, PhD
D. E. Smith, PhD

Associate Members

W. Bowman
K. Church, BA, MA, PhD
P. Cole
T. D. Das Gupta
D. Farmer, BA, MA, PhD
L. Fitznor, BA MEd, EdD
D. Heywood
K. Johnson, Dr
M. Kassam, BA, MA, PhD
D. Khayatt
L. Korrick
A. Lauzon
G. Malszecki
S. Nestel, BA, MA, PhD
P. O'Riley
A. C. Okolie, BSc, MSc, PhD
A. B. Rossiter, BM, MSW, EdD
P. Sawchuk, BSc, BEd, MA, PhD
B. Thomas
K. Veblen
P. Wakewich
R. Walcottt, BA, MA, PhD, CRC
W. Wane, PhD
D. Wells
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General Information

For general information, consult the Sociology and Equity Studies section of the OISE/UT *Bulletin* or the Web sites listed above.

Departmental Research Areas

The Department of Sociology and Equity Studies in Education offers a full range of programs leading to M.Ed., M.A., Ed.D., and Ph.D. degrees. These programs offer students preparation in sociology in education with an emphasis on equity issues. Five areas of concentration are described below.

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. Throughout our history, we have worked across, and attempted to bridge, divisions between theory and practice, insisting that the complexity of formal educational settings and educational practices more broadly warrant equally complex and critical theoretical analysis.

Faculty and student research and interests represent a variety of approaches to sociology and equity studies in education. The current composition of the department provides particular opportunities for students who may wish to focus their activities in the areas listed below, as well as in the interdisciplinary and interdepartmental research areas and collaborative programs. Students are not restricted to a single research area when selecting courses.

1 Aboriginal and Indigenous Studies in Education

This research area addresses current issues, trends, perspectives, and models of Aboriginal and Indigenous education through historical, cultural, spiritual, social and political philosophies and themes. Specific research areas include examination of Aboriginal, Indigenous, and marginalized knowledge in global contexts and pedagogical implications for educational change; and roles of schools, media, in art, theatre, poetry, film and literature, institutions, governments and historical and contemporary policy in producing conditions of constraint, images of Indigenous peoples, social and class differences, dominance, control politics, and social inequalities with regard to Aboriginal and Indigenous peoples; and a special interest in developing, promoting, and sustaining of healing and wellness, and Indigenous and anticolonial thought in the academy and in the community. The goal of this research area is to create spaces for Aboriginal and Indigenous knowledge.

2 Critical Race and Anti-Racism Studies

Courses listed in this research area provide students with an integrative view of social difference (race, class, gender, disability, and sexuality) and a critical reading of multiple social oppressions revealed in different sites and sources (schools, universities, local communities, media, law, and cultural production). The Centre for Integrative Anti-Racism Studies (CIARS) brings together faculty and students whose research interests and political commitments are in anti-racism. It provides a supportive research environment, linking communities of colour, marginalised communities, and the University in the pursuit of social justice.

3 Critical Pedagogy and Cultural Studies

Critical inquiry into the roles played by educational institutions in producing and maintaining cultures, symbolic dominance, and social inequalities; analyses of alternative teaching materials and pedagogies intended to address and transform domination and inequality.

4 Feminist Studies and Gender Relations in Education

Gender studies in the family, school, and workforce; feminist practice; gender, class, race, language, and cultural and biological reproduction; social history of women and women's education; feminism and feminist historiography. Note that other courses offered by feminist faculty, but not listed in this research area, may be taught from a feminist perspective.

5 Learning, Work, and Change

This research area is devoted to teaching and research about the interrelations of organized/informal learning, paid/unpaid work, societal change processes, and the roles of educators in improving these relations. Courses offer theories and methods for understanding political, economic and ideological forces associated with educational and workplace change. Some representative themes include influences of social class, gender, ethnicity and generation on learning practices and work opportunities; impacts of technological changes on labour markets, labour processes and training programs; school and community relations; teachers' work and educational innovation; and problems of underemployment and the future of work. This research area is closely related to the interdepartmental research area in Learning and Work.

Interdepartmental and Interdisciplinary Research Areas and Collaborative Programs

The Department is also involved in interdepartmental and interdisciplinary research areas, as well as collaborative programs:

1 Critical Pedagogy and Cultural Studies

2 Learning and Work

For details, see the *OISE/UT Bulletin.*

3 Etudes franco-ontariennes en francais

Le Departement de sociologie et d'etudes de l'equite en education participe a un programme de cours a distance par ordinateur intitule "Etudes franco-ontariennes en education" offert par le Departement de curriculum, d'enseignement et d'apprentissage, qui porte sur les realites sociales et scolaires des communautes fancophones et dont la langue d'enseignement est le francaiss. II est egalement possible de poursuivre des etudes de maitrise en education a distance, en francais, a travers

le *Département de sociologie et d'etudes de l'equite en education.* Ce programme multidisciplinaire mene au diplôme de M.Ed. Des cours sur place sont egalement offerts. Vous trouverez la description en francais des cours de sociologie qui font partie de ce programme dans la liste qui suit.

4 Gender Equity in Education

This interdepartmental research area focuses on the practical and professional relevance of gender equity issues for teachers and educational administrators. It is taken as part of the student's main program within the Department of Sociology and Equity Studies in Education. The Centre of Women's Studies in Education (CWSE) coordinates the specialization. Contact Paula Bourne (pbourne@oise.utoronto.ca) for more information.

5 Collaborative Environmental Studies Program

Master's level students in the Department of Sociology and Equity Studies in Education can participate in the Collaborative Master of Education in Environmental Studies program. For complete details on the program, consult the relevant section in the *OISE/UT Bulletin.*

6 Comparative, International, and Development Education

This collaborative graduate program is fully described in the section on Collaborative Graduate Programs in the *OISE/UT Bulletin.*

7 Collaborative Program in Women's Studies

The Collaborative Graduate Program in Women's Studies involves most of the feminist faculty in SESE. A separate brochure is available and information is on the Web at www.utoronto.ca/iwsgs/.

Admission Requirements

The Department welcomes applicants with diverse but relevant backgrounds. M.Ed. and Ed.D. applicants must have the equivalent of 12 months' professional experience. M.A. and Ph.D. candidates who are admitted without sufficient previous study in sociology or a cognate discipline may be required to take a longer program.

In addition to the general requirements for admission as outlined in the Minimum Admission, Program, and Degree Requirements section, applicants are required to submit the following:

1 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;

2 two letters of reference, preferably from university instructors with whom the applicant has studied or worked;

3 at least one sample of written work in the social sciences.

Incomplete applications may be subject to processing delays or rejection.

Program Requirements

The M.Ed. degree may be pursued on a full-time or part-time basis under three options:

- Option II (eight half-courses and a Major Research Paper (MRP),
- Option III (six half-courses and a thesis), or
- Option IV (ten half-courses).

The M.A. degree may be pursued full-time or part-time and requires a thesis.

The Ed.D. degree may be pursued on a full-time or part-time basis with specific course requirements (stated in the offer of admission) reflecting the unique professional character of the degree. Students in this degree program may begin their studies on a part-time basis, but they must register full-time for a minimum of two consecutive sessions, not including summer, of on-campus study and then maintain continuous registration full-time subsequently until all degree requirements are completed.

Ph.D. students must maintain full-time status throughout their program of study. All students in this degree program must also successfully complete the non-credit course SES 1913H *SESE Thesis Students' Seminar* prior to the comprehensive examination.

The Department offers courses off campus as well as in distance mode to serve students in localities outside Toronto. Off-campus students typically complete their program by enrolling in courses on campus during the summer and/or by enrolling as full-time students during the regular academic year. Information about off-campus and on-campus courses to be offered in the Summer and Winter Sessions will be noted in the "Graduate Studies Course Schedule", available from the Registrar's Office, OIS/UT, in the Winter Session.

Course outlines are available for consultation in the Department. To help students articulate and focus their intellectual concerns, the Department offers:

- a designated faculty advisor for each student (assigned to the student upon admission)
- a supervisor (to be selected by the student with consent of the supervisor) for theses, dissertations and MRPs

- independent study and research courses
- access to related courses in other graduate departments
- course outlines and evaluations
- a speakers series
- the Sociology and Equity Studies Handbook
- notices and information sent by e-mail through a departmental conference
- workshops on particular topics such as writing thesis proposals.

The Department is organized as a constitutional democracy with a General Assembly and standing committees which provide for policy and decision-making in departmental programs, selection of incoming students, etc. Our constitution is based on one person/one vote, and staff, faculty, and registered students in the Department have voting rights and are welcome to participate in the governance of the Department.

Courses of Instruction

Not all courses are offered every year. Please consult OISE/UT's Graduate Studies Course Schedule.

Master's Level

SES 1900H Introduction a la sociologie de l'education/M. Heller
SES 1900H Introduction to Sociology in Education/P. Olson
SES 1901H Basic Concepts in Sociology in Education/K. Dehli
SES 1902H Introductory Sociological Research Methods in Education/ P. Olson
SES 1903H Sociological Survey Research Methods in Education/P. Olson
SES 1904H Sociological Theory in Education/ K. Dehli, Staff
SES 1905H Qualitative Approaches to Sociological Research in EducationlM. Heller, S. Acker
SES 1907H L'education multilingue et multiculturelle: l'analyse sociologique/M. Heller
SES 1909H Eco-Sociology/M. Eichler
SES 1910H The Social Organization of Knowledge/K. Dehli
SES 1911H Sociologie de I' education specialisee/N. Belanger
SES 1912H Foucault and Research in Education and Culture: Discourse, Power and the Subject/K. Dehli
SES 1913H SESE Thesis Students' Seminar (Credit/No Credit)/M. Eichler
SES 1915H Education and Popular Culture
SES 1921Y The Principles of Anti-Racism Education/G. J. S. Dei
SES 1922H Sociology of Race and Ethnicity/ G. J. S. Dei
SES 1923H Racism, Violence, and the Law: Issues for Researchers and Educators/S. H. Razack
SES 1924H Modernization, Development, and Education in African Contexts/ G. J. S. Dei
SES 1925H Indigenous Knowledge and Decolonization: Pedagogical Implications/G. J. S. Dei
SES 1926H Race, Space and Citizenship: Issues for EducatorslS. Razack
SES 1927H Global Economic Restructuring — International Migration — Immigration Policies (Canada, U.S., Germany)/R. Baaba Folson
SES 1950H Student Deviance, Resistance, and Educational Transformation/ P. Olson
SES 1951H L'Ecole et la communaute/Staff
SES 1951H The School and the Community/ N. Belanger
SES 1954H Marginality and the Politics of Resistance/S. H. Razack
SES 1956H Social Relations of Cultural Production in Education/ R. Walcott
SES 1957H Doing Disability in Theory and Everyday Life/Staff
SES 1958H The Internet and Cyberspace: Issues of Culture, Identity, Access, and Control/J. Iseke-Barnes
SES 1982H Women, Diversity, and the Educational Systern/S. Acker, H. Lenskyj
SES 1983H Gender, Race and Historical Sociology/Staff
SES 1985H Women's Learning, Women's Health Movements, and the Health Professions/H. Lenskyj
SES 1988H Diversity and Social Justice Issues in Physical Education, Recreation and Sport/H. Lenskyj
SES 1989H Black Feminist Thought/N. Wane
SES 1992H Feminism and Poststructuralism in Education/K. Dehli
SES 2910H Changes in Families and Policy Consequences for Government and Education/M. Eichler
SES 2914H Education, Gender Relations, and Masculinity/Stafl
SES 2915H Managing Educational and Employment Diversity/Staff

SES 2940H Rethinking Marxism and Education/D. W. Livingstone, P. H. Sawchuk
SES 2941H Social Inequities and Education/ D. W. Livingstone
SES 2942H Education and Work/P. H. Sawchuk
SES 2970H Indigenous Peoples and Medias: Theorizing, Decolonizing, Cultural Vitalization and Self-Determination/J. Iseke-Barnes
SES 2998H Individual Reading and Research in Sociology and Equity Studies in Education: Master's Level
SES 2999H Special Topics in Sociological Research in Education/Staff

Doctoral Level

SES 3900H Advanced Issues in Sociological Research Methods in Education/ Staff
SES 3910H Advanced Seminar on Race and Anti-Racism Research Methodology in Education/G. J. s. Dei
SES 3911H Cultural Knowledges, Representation and Colonial Education/ N. Wane
SES 3912H Race and Knowledge Production: Issues in Research/S. Razack
SES 3913H En/Coding Domination: Theorizing Power Relations Based on Race, Gender, Class and Sexuality/R. B. Folson
SES 3914H Anti-Colonial Thought and Pedagogical Challenges/G.J.S. Dei
SES 3920Y The Politics of Representation and Pedagogies of 'Difference/ Staff
SES 3921H Language and Social Difference in Education: Comparative Perspectives/M. Heller
SES 3922H Analyzing Classroom Discourse/ M. Heller
SES 3931H Feminism and Postructuralism in Education/K. Dehli
SES 3932H Contemporary Perspectives on Women and Higher Education/ S. Acker
SES 3933H Theorizing Transnationality: Feminist Perspectives/D. A. Trotz
SES 3942H Innovations in Education: A Comparative Analysis/ M. P. Farrell
SES 3943H Sociology of State Formation and Genealogies of Government/ K. Dehli
SES 3949H Advanced Studies in Learning and Work/D. W. Livingstone
SES 3951H Political Economy, Cultural forms and the Learning Society/D.W. Livingstone
SES 3952H Sexism, Racism, Colonialism: Pedagogical Implications/ D.A. Trotz, Staff
SES 3998H Individual Reading and Research in Sociology and Equity Studies in Education: Doctoral Level/ Staff
SES 3999H Special Topics in Advanced Sociological Research in Education/Staff
JSA 5147H Language, Nationalism and Post-Nationalism/M. Heller
JTE 1952H Language, Culture, and Education/M. Heller
JTE 1952H Langue, culture et education/ M. Heller
JTE 2912H Teacher's Work: Classrooms, Careers, Cultures, and Change/ S. Acker

Software Engineering (Collaborative Program)

For advice, contact
Dr. M. Stumm
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Room 20028, 10 King's College Road
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M5S 3G4
Telephone: (416) 978-3226
Fax: (416) 971-2326
E-mail: stumm@eecg.utoronto.ca

For information, see
Web: congese.on.ca
or contact
Dr. Frank Tompa
Director
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Computer Science Department
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E-mail: congese@cs.utoronto.ca

Participating University of Toronto departments in the Software Engineering Collaborative Program have ceased to accept new applications. Current students will finish out their programs.

Opportunities for research in the field of software engineering are available in the regular degree program offerings of the Departments of Computer Science and Electrical and Computer Engineering. Consult the separate entries in this calendar.

Software engineering is a collection of principles, models, methods, and techniques for the development, maintenance, evolution, and reuse of software that meets the functional, performance, and quality requirements in an economic and competitive manner.

The collaborative program in Software Engineering is offered as part of the Consortium for Graduate Education in Software Engineering (ConGESE). ConGESE is a cooperative effort between ten departments in seven Ontario Universities (Carleton, Ottawa, Queen's, Toronto, Waterloo, Western, and York) and several industry partners. The two collaborating departments at the University of Toronto are Electrical and Computer Engineering (ECE) and Computer Science (CSC). This part-time collaborative program is specially structured for software professionals currently working in the field. The courses are commonly offered on-site with cooperating industrial sponsors and are designed to fit into the working schedule of professionals who might otherwise find it difficult to attend regular, on-campus courses.

Admission Procedures and Requirements

Applications must be made to one of the participating universities. At the University of Toronto, applicants must be accepted into one of the collaborating graduate units (CSC or ECE) and are expected to meet the home graduate unit's admission requirements in addition to a standing equivalent of B+ in the final year of a four-year University of Toronto bachelor's degree program.

Program Requirements

After completing the degree requirements for the home graduate unit and the collaborative program, students will graduate with the existing degree designation used for their department, with the additional notation "specialization in software engineering".

Degree of Master of Science (specialization in software engineering)

The M.Sc. program in the Department of Computer Science requires five graduate-level half-courses satisfying a breadth requirement plus a thesis (equivalent to four half-courses).

Degree of Master of Engineering (specialization in software engineering)

The M.Eng. program in the Department of Electrical and Computer Engineering requires nine graduate-level half-courses, satisfying a breadth requirement, or a project in lieu of three half-courses.

Program Structure

Each course will require about 36 hours of classroom time, plus about twice that much time reviewing new material and doing assignments. Various formats have been used for the 36 hours, including

- 12 weekly sessions of 3 hours each or
- 6 biweekly sessions of 6 hours each or
- 6 consecutive 6-hour days.

The format is normally negotiated between the instructor and the class. The thesis or project will be written under the direction of an assigned supervisor.

South Asian Studies (Collaborative Program)

Program Committee

H. Miller, BA,MSc,MA,PhD/Anthropology
C. Kanaganayakam, BA, PhD/English (Director)
K. Rankin, BA, MRP, PhD/Geography
K. Goonewardena, BSc, MPI, PhD/Geography
M. Kasturi, BA,MPhil,MA,PhD/History
R. Birla, BA, MA, MPhil, PhD/History
A. Rubinoff, BA, MA, PhD/Political Science
C. T. Mclntire, BA, MA, MDiv, PhD/Religion
F. M. Garrett, BA, MA, PhD/Religion
A. Dhand, BA, MA, PhD/Religion
U. George, BEd, BSc, MA, MA, PhD, Royal Bank Chair in Applied Social Work Research/Social Work

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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 for South Asian Studies and its regular activities of research fora, conferences, and visiting lecturer and scholar programs. In addition, the University of Toronto'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 following graduate units: Anthropology, English, Geography, History, Political Science (Ph.D. only), Religious Studies, Social Work. A supplementary application must be submitted to the Centre for South Asian Studies. The form can be obtained by writing to the Centre for South Asian Studies or by downloading from the Web site.

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.

Admission Requirements

Candidates 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

Students enrolled in the Collaborative Program in South Asian Studies are required to complete the requirements of the Centre and the home unit in which they are enrolled.

Master's Program

Requirements of the Centre for the master's program:

1 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.

2 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.

3 For master's students writing a thesis, it is expected that their dissertation will include a significant South Asian component.

4 For master's students writing a research paper, the home unit will determine whether a South Asian component is required in the research paper.

5 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.

Doctoral Program

Requirements of the Centre for the doctoral program:

1 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.

2 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.

3 The dissertation to include a significant South Asian component.

4 A research presentation to the Program Committee on a South Asian topic in the third or fourth year of the program.

5 Language requirement, depending on the student's area of specialization.

Spanish SPA

Graduate Faculty

Full Members

J. Blackmore, BA, MA, PhD
(Coordinator of Graduate Studies)
J. F. Burke, BA, MA, PhD
E. N. Burstynsky, BA, MA, PhD
L. M. Colantoni, MA, PhD
M. Danesi, BA, MA, PhD, FRSC
A. Percival, BA, MA, PhD
A. T. Perez-Leroux, BA, MA, PhD
D. M. Rojinsky, BA, MA, PhD
S. J. Rupp, BA, MA, MPhil, PhD
(Chair)
R. M. Sarabia, BA, MA, PhD
R. Sternberg, BA, MA, PhD

Members Emeriti

K. A. Ellis, BA, MA, PhD, DFiI, FRSC
R. J. Glickman, AM, PhD
J. Gukoy, MA, PhD, FRSC
P. R. Leon, MA, PhD
E. G. Neglia, MA, PhD
W. L. Rolph, BA, MA, MPh
R. Skyrme, BA, MA, MLitt, PhD
M. J. Valdes, BA, MA, PhD, FRSC, Miembro Correspondiente de la Academia Mexicana
J. R. Webster, BA, MA, PhD, FRSC

Associate Members

M. C. Cuervo, MA, PhD
R. A. Davidson, MA, PhD
S. Munjic, MA
V. R. Rivas, MA, PhD
N. Rodriguez, MA, PhD

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Candidates are accepted under the general regulations, provided that they also satisfy the Department's requirements stated below. Their programs must in all cases be approved by the Department.

Degree of Master of Arts

Applicants for admission to candidacy for the M.A. degree must submit two letters of recommendation with their application for admission.

Candidates must satisfy the departmental requirements for entry into a one-year M.A. program, have achieved at least mid-B standing in their University of Toronto 300- and 400-series courses (or equivalent courses) and be approved by the Department, or have equivalent qualifications from recognized universities.

Candidates who wish to specialize in the field of Hispanic linguistics (see 3 below) must complete an introductory course in general linguistics (LIN 100Y or equivalent) before entering the program. If necessary, this course may be taken during the summer immediately preceding the M.A. year.

Candidates must show evidence of an oral and written command of Spanish. They must complete a total of four graduate full-course equivalents and will specialize in one of three fields:

1 Spanish Peninsular literature
2 Spanish American literature
3 Hispanic linguistics

Degree of Doctor of Philosophy

Admission to the Ph.D. program requires a master's degree in an appropriate discipline (Spanish, Comparative Literature, or Linguistics) with an average of A- or higher. Applicants from recognized universities must have equivalent qualifications to those expected of applicants from the University of Toronto. The Department does not allow direct entry to the doctoral program with a B.A., nor does it allow M.A. students to transfer to the doctoral program before the course work for the M.A. is completed.

Applicants must arrange for two letters of reference to be sent directly to the Department and must submit with their applications a one-page Statement of Purpose describing the general area or areas in which they intend to conduct their doctoral research. In addition, each candidate must submit a sample of his or her writing, in English or Spanish (at least 2000 words in length), on a subject related to the candidate's area of interest.

Admission 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 candidate's preferred area of interest and the suitability of the candidate in relation to the structure and programs of the Department.

The Ph.D. program is designed to be completed in four years, but individual students may require further time. In 2003-2004 there were 17 students registered in this program; 3 doctorates were conferred, and the average time for completion was 5.7 years.

The Ph.D. program specifies a period of two sessions of residence 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 Department's activities associated with the program.

Candidates must complete a total of four full-course equivalents at the doctoral level. Each candidate will specialize in one of the program's three fields:

1 Spanish Peninsular literature
2 Spanish American literature
3 Hispanic linguistics

and courses must be selected in accordance with distribution requirements for the chosen field. Courses may also be taken in a cognate discipline (for example, History, Philosophy, Comparative Literature, Linguistics, Medieval Studies, Women's Studies). Details are available on the Department's Web site.

In addition to course requirements, Ph.D. candidates must successfully complete, before the end of the fall of the second year in the program, an oral comprehensive examination based on coverage courses. They will also submit, by the first week of March of the second year of residence, a research essay in Spanish which will be defended before a committee prior to the end of the same month.

Before the beginning of the third year of the doctoral program, all candidates must demonstrate, in addition to an oral and written command of Spanish, a knowledge of French and of a third foreign language. 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.

Collaborative Programs

The Department participates in two collaborative programs:

1 Editing Medieval Texts
2 Women's Studies

For detailed information, consult the separate entries in this calendar.

Courses of Instruction

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/S. Rupp
COL 5029H Reading Cervantes/S. Rupp
JRL 1100Y Introduction to Romance Philology/Staff
LIN 1029H Sound Patterns in Language/Staff
LIN 1031H Morphological Patterns in Language/Staff
SPA 1053H History of the Spanish Language/Staff
SPA 1081H The Structure of Spanish/A. T. Perez-Leroux
SPA 1082H Sociolinguistics of Spanish/L. M. Colantoni
SPA 1083H Microvariation in Spanish/A. T. Perez-Leroux, L. M. Colantoni
SPA 1084H Experimental Approaches to Hispanic Linguistics/L. Colantoni, A. T. Perez-Leroux
SPA 1088H Spanish Syntax/A. T. Perez-Leroux
SPA 1101H Topics in the Acquisition of Spanish/A. T. Perez-Leroux
SPA 1103H Topics in Spanish Phonology/L. M. Colantoni
SPA 1150H,Y Directed Research in Hispanic Linguistics/Staff
SPA 2021H The Politics of Print/J. Blackmore
SPA 2022H Books and Borders/J. Blackmore
SPA 2031H Writing that Conquers: Early Colonial Historiography/D. M. Rojinsky
SPA 2032H The Spiritual Conquest of the Americas: Empire and Ethnography/D. M. Rojinsky
SPA 2033H Representing Colonial Violence and Terror/D. M. Rojinsky
SPA 2121H Psychoanalysis and the Passions in Early Modern Literature/S. Munjic
SPA 2171H Politics and Aesthetics in Early Modern Verse/S. Munjic
SPA 2187H Comedy and the Comedia in Early Modern Spain/S. Rupp
SPA 2189H Lope and Calderon/S. Rupp
SPA 2277H The Modern Spanish Cuento (1860-1936)/A. Percival
SPA 2279H Contemporary Hispanic Women's Writing II/A. Percival

SPA 2282H The Contemporary Spanish Cuento (1936-Present)/ A. Percival
SPA 2284H Narrative and Political Transition in Contemporary Spain/R. A. Davidson
SPA 2291H The Urban Experience in Spain/ R. A. Davidson
SPA 2351H Masters of Twentieth-Century Spanish Drama/A. Percival
SPA 2404H The Latin American Novel/R. M. Sarabia
SPA 2405H Issues of Testimonio/ V. Rivas
SPA 2432H Text and Image in Latin American Culture/R. M. Sarabia
SPA 2802H The Politics of Errantry in the Hispanic Caribbean/N. E. Rodriguez
SPA 2805H Representations of Women in Latin American Culture/R. M. Sarabia
SPA 2951H Modernism in Latin America/ R. Sternberg
SPA 3000H,Y Directed Research in Hispanic Literatures/Staff

Speech-Language Pathology SLP

Graduate Faculty

Full Members

S. M. Abel, BSc, MA, PhD
T. Bressmann, MA, MSc, PhD
L. F. De Nil, MSc, PhD (Chair)
N. E. Diamant, MDCM, FRCP(C)
A. Eriks-Brophy, MSc, PhD
L. E. Girolametto, BA, MSc, PhD
M. L. Hyde, BSc PhD
C. J. Johnson, BS, MS, MA, PhD (Coordinator of Graduate Studies)
R. Martino, MA, MSc, PhD
B.M. O'Keefe, BS, MS, PhD
E. A. Rochon, BA, MSc, PhD
R. H. Smyth, BA, MSc, PhD
P. A. Square, BSc, MA, PhD
P. A. Stewart, BSc, MSc, PhD
P. H. H. van Lieshout, PhD

Associate Members

K. Bradley, BA, MHSc, PhD
L. Ellwood, BSc, MHSc
W. Estabrooks, BA, MEd, Dipl Ed Deaf
M. C. Jacobson, BA, PhD
A. Kagan, PhD
R. Kroll, BSc, MSc, PhD
C. Leonard, BA, MSc, PhD
P. H.. Parnes, BSc, DSPA
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C. Steele, BA, MHSc, PhD
N. Thomas-Stonell, BSc, DSP
S. J. Wagner, BSc MSc
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Speech-language pathology is concerned with human communication and its disorders. The Department offers professional and research degree programs for careers in the discipline.

Collaborative Programs

The Department participates in two collaborative programs:
1 Aging and the Life Course
2 Neuroscience
Candidates in the M.Sc. and Ph.D. programs in speech-language pathology may choose to enrol. For details, consult the separate entries in this calendar.

Degree of Master of Health Science

The Master of Health Science (M.H.Sc.) 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 the development of an analytical and evaluative approach to 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.

Admission Requirements

Candidates for admission must have completed a 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. Additional requirements include prerequisite courses in child development, linguistics, phonetics, elementary statistics, and human physiology. See the departmental Web site for a full listing of admission requirements.

Facility in oral and written English is required for both the academic and applied aspects of the program. Applicants who were educated outside Canada, whose primary language is not English, and who graduated from a university where the language of instruction was not English, must demonstrate facility in the English language through the successful completion of one of the English proficiency tests listed in this calendar. To satisfy the requirement, the Department strongly prefers the Test of English as a Foreign Language (TOEFL) with a minimum score of 600 (250 on the computer-based test), accompanied by the Test of Written English (TWE) with a minimum score of 5, and the Test of Spoken English (TSE) with a minimum score of 50.

If an applicant finds it impossible to take the TOEFL, TWE, and TSE, the Department will accept one of the following:

1 the Michigan English Language Assessment Battery (MELAB) with a minimum score of 85; 2 the International English Language Testing System (IELTS) with a minimum score of 8.0.

In addition to the proficiency test, applicants may be requested to attend a personal meeting with members of the Graduate Department of Speech-Language Pathology where their mastery of oral English for meeting clinical requirements will be assessed.

Candidates for the full-time and the part-time programs must submit applications by mid-January. Check the departmental Web site for the exact application deadline. All applications for the M.H.Sc. program must be completed online via the Ontario Universities Application Centre Web site (www.ouac.on.ca/orpas).

Program Requirements

The professional M.H.Sc. 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 placement lasts between 4 and 10 weeks for a total of 31 weeks of clinical experience throughout the 2 year M.H.Sc. program. Students must accept placements offered to them and are responsible for all travel and accommodation costs. Candidates 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).

The M.H.Sc. program does not have a thesis requirement; however, all M.H.Sc. students will be required to complete a portfolio that demonstrates proficiency in key areas of professional practice, including application of research principles, prior to graduation.

Degree of Master of Science

The Master of Science (M.Sc.) 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 M.Sc. degree in speech-language pathology is a research-oriented program and does not prepare students for clinical practice. Although the primary objective of the M.Sc. program is to prepare students for doctoral studies in speech and language sciences, successful completion of the program does not guarantee entrance into the Ph.D. program.

Admission Requirements

Students with a four-year degree, or its equivalent, in speech-language pathology or a related discipline, are considered for admission according to the general admission criteria of the School of Graduate Studies. 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. Application deadlines are January 15 for September registration and September 15 for January registration. Students applying to the M.Sc. program should use the SGS application form online at www.sgs.utoronto.ca.

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

The program requires a one-year residency period which typically is sufficient for completion of the course work. Course requirements are determined by the student's supervisory committee. Normally, the candidate is required to complete satisfactorily a minimum of two full courses, consisting of at least one full course in research design and methodology, and at least one full course in the area of research interest. In addition, students are required to participate in student and faculty research seminars. Students also are required to engage in a research project, present the results in a written thesis, and complete a successful oral defence of the thesis.

Reclassification Examination

Master of Science candidates 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 Doctor of Philosophy program. This examination normally is undertaken following the completion of at least one session and within 18 months of registration in the M.Sc. program.

Degree of Doctor of Philosophy

The purpose of the Ph.D. 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.

Admission Requirements

Admission to the Ph.D. degree program is based on the applicant's demonstrated qualifications for advanced research 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. Normally, candidates are expected to have completed a M.Sc. or M.A. degree in speech-language pathology, or a related discipline, with a minimum of a B+ average over the course of the program. Students applying to the Ph.D. program should use the SGS application form online at www.sgs.utoronto.ca.

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. 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.

Program Requirements

The Ph.D. program normally extends over three to four years. Students complete a residency requirement during the first two years of the program. Course requirements are determined by the student's supervisory committee and consist of a minimum of three full courses or the equivalent. Candidates must demonstrate evidence of adequate knowledge in research design and statistics or must include suitable course work as determined by the supervisory committee. Candidates for the Ph.D. degree are expected to 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.

Courses of Instruction for the M.H.Sc. 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)/ S. Wagner
SLP 1502Y Anatomy and Embryology/ P. Stewart
SLP 1503Y Articulation and Related Disorders/A. Eriks-Brophy
SLP 1505Y Child Language I/L. Girolametto
SLP 1506H Child Language II/L. Girolametto
SLP 1507H° Clinical Laboratory in Speech-Language Pathology/L. Ellwood
SLP 1514Y Applied Audiology/Staff
SLP 1516H Aural Rehabilitation/A. Eriks-Brophy
SLP 1520H Principles of Clinical Practice/ S. Wagner
SLP 1521H Augmentative Communication/ Staff
SLP 1522Y Speech Physiology and Acoustics/P van Lieshout
SLP 1529H Fluency Disorders/L. De Nil
SLP 1530H Voice Disorders/T. Bressmann
SLP 1532H° Clinical Laboratory in Hearing Disorders: Aural Rehabilitation or Audiology Component/ L. Ellwood, S. Wagner

The second year of the program for full-time students will consist of:

SLP 1508Y Advanced Clinical Laboratory in Speech-Language Pathology/ L. Ellwood
SLP 1525H Structurally Related Disorders/ T. Bressmann
SLP 1527H+ Physical Analysis of Speech Disorders /P. van Lieshout

° 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.

SLP 1528H+ Research in Speech-Language Pathology/C. Johnson
SLP 1533Y Aphasia/E. Rochon
SLP 1534Y Motor Speech Disorders/ R. Martino
SLP 1535H+ Advanced Principles of Clinical Practice/S. Wagner
SLP 1536H Swallowing Disorders/R. Martino
SLP 1538H Neurocognitive Communication Disorders/E. Rochon
SLP 2500Y Advanced Internship/S. Wagner

Courses of Instruction for the M.Sc. and Ph.D. Programs

SLP 3001H Theoretical Foundations of Communication Sciences/ L. De Nil, C. Johnson
SLP 3002H Research Methodologies in Communication Sciences/ C. Johnson
SLP 3003H° Research Seminar/Staff
SLP 3004H,Y Reading Seminar/Staff
SLP 4000H° Research Seminar/Staff
SLP 4001H Philosophical and Theoretical Foundations of Communication Sciences/C. Johnson, L. De Nil
SLP 4007H,Y Reading Seminar/Staff

Special Courses Offered to Students from Other Departments

SLP 2501H Special Topics in Communication Disorders/Staff
SLP 2502Y Specialized Study in Communication Disorders/Staff

°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.

Statistics STA

Graduate Faculty

Full Members

D. Brenner, BSc MSc PhD
S. A. Broverman, BSc MSc PhD, ASA
L. J. Brunner, BA, PhD, MA, PhD
P. N. Corey, BSc, MA, PhD
D. Escobar, BS, PhD
M. J. Evans, BSc, MSc, PhD
A. Feuerverger, BSc PhD
(Associate Chair, Graduate Studies)
K. Knight, BSc, MS, PhD
(Chair)
X. Lin, BSc, MSc, MMath, PhD, ASA
W. Lou, PhD
P. J. McDunnough, BSc, MSc, PhD
R. M. Neal, BSc MSc PhD
J. Quastel, BSc, MS, PhD
N. Reid, BMath, MSc, PhD, FRSC
J. Rosenthal, BSc, MA, PhD
J. Stafford, BSc, MSc, PhD
B. Virag, MA, PHD, BA

Members Emeriti

D. F. Andrews, BSc, MSc, PhD, Fellow ASA
D. A. S. Fraser, BA, MA, MA, PhD, DMath, FRSC
I.. Guttman, BSc MA, PhD
M. S. Srivastava, MSc, PhD

Associate Members

V. R. Craiu, BS, MS, PhD
A. L. Gibbs, BMath, BEd, MSc, PhD
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L. Sun, BSc,PhD
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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 Depament of Statistics offers opportunities for study and research in the fields of probability, applied probability, theoretical statistics, and applied statistics. 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 Community Health. The Department maintains an active seminar series and strongly encourages participation by graduate students.

Candidates are accepted under the general regulations. The Department requires a TOEFL (Test of English as a Foreign Language) score of 580 or better and successful completion of the TWE (Test of Written English) for candidates whose primary language is not English.

Degree of Master of Science

Qualified candidates may be accepted into a one-year or two-year program for the degree of Master of Science. It is also possible to obtain the M.Sc. degree by part-time studies since there is no formal residency requirement for this degree.

Candidates for the one-year program are required to take and pass four approved full-year courses, one of which may be an approved supervised reading project. Alternatively, candidates may take STA 3000Y plus five half-year courses. Two approved half-year courses are considered the equivalent of a full-year course. Further details may be found in the Graduate Information brochure available from the Department. All programs must be approved by the Coordinator of Graduate Studies.

The first year of a two-year program consists of prerequisite and other courses to prepare the candidate for the one-year M.Sc. program. Candidates who plan to undertake the part-time M.Sc. degree must qualify for admission to the one-year program.

Students will not be permitted to begin the full-time master's program in a January session; therefore, only applications for the part-time MSc. program will be considered for January admission.

Degree of Doctor of Philosophy

Admission Requirements

Candidates are admitted under the general regulations for the Ph.D. However, under exceptional circumstances, candidates may be admitted to the Ph.D. program from a bachelor's degree. In this case, they will be required to complete STA 2111H, STA 2211H, STA 3000Y, and four other half-courses. (This repre-

sents two half-courses more than the normal Ph.D. course work requirement.)

Program Requirements

1 There will be a one-year residence period for all students admitted to the Ph.D. program who have completed a master's degree. Students admitted from a bachelor's degree will have a two-year residence period.

2 There is no major/minor field requirement for graduation.

3 Candidates are required to take six half-courses including STA 2111H, STA 2211H, and STA 3000Y. Students transferring from the M.Sc. program who have taken any or all of STA 2111H, STA 2211H, and STA 3000Y during their MSc. program will have the number of required courses reduced accordingly.

4 Candidates are required to pass a comprehensive examination and satisfy the Department of their knowledge of probability and statistics, and advanced knowledge at the master's level in their degree area (applied statistics, theoretical statistics, or probability) prior to embarking on a thesis. The submission of a suitable thesis is required. Further details may be found in the Graduate Information brochure available from the Department.

Courses of Instruction

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.

STA 1001H Applied Regression Analysis
STA 1003H Sample Survey Theory and its Application
STA 1004H Introduction to Experimental Design
STA 1005H Applied Multivariate Analysis
STA 1007H Statistics for Life and Social Scientists
STA 1008H Applications of Statistics
STA 1502H Stochastic Models in Investments
STA 2004H Design of Experiments
STA 2006H Applied Stochastic Processes
STA 2101H Methods of Applied Statistics I
STA 2102H Computational Techniques in Statistics
STA 2103H An Introduction to Bayesian Inference
STA 2104H Statistical Methods for Machine Learning and Data Mining
STA 2111H Probability Theory I
STA 2112H Mathematical Statistics I
STA 2162H Statistical Inference I
STA 2201H Methods of Applied Statistics II
STA 2202H Time Series Analysis
STA 2209H Lifetime Date Modelling and Analysis
STA 2211H Probability Theory II
STA 2212H Mathematical Statistics II
STA 2262H Statistical Inference II
STA 2270H Introduction to Wavelet Methods in Statistics
STA 2342H Multivariate Analysis I
STA 2442H Multivariate Analysis II
STA 2453H Statistical Consulting
STA 2500H Actuarial Risk Theory
STA 2501H Mathematical Risk Theory
STA 2503H Applied Probability for Mathematical Finance
STA 2505H Credibility Theory and Simulation Methods
STA 2542H Linear Models
STA 3000Y Advanced Theory of Statistics
STA 3003H Advanced Sample Survey Theory and Practice
STA 3047H Stochastic Processes
STA 3077H Research Topics in Probability Theory
STA 3101H Neural Networks and Related Statistical Methods
STA 3102H Stat Theory-Quality Control
STA 3103H Bayesian/Likelihood Asymptotics
STA 3431H Monte Carlo Methods
STA 4000H Supervised Reading Project I
STA 4001H Supervised Reading Project II
STA 4210H Smoothing, Semi- and Non-parametric Regression
STA 4247H Research Topics in Stochastic Processes
STA 4272H Research Topics in Statistics
STA 4273H Research Topics in Bayesian Inference
STA 4274H Research Topics in Statistical Computation
STA 4275H Research Topics in Likelihood Inference
STA 4276H Research Topics in Monte Carlo Methods
STA 4312H Bayesian Linear Models
STA 4315H Computational Methods in Statistical Genetics
STA 4352H Research Topics in Multivariate Statistics
STA 4360H Theory of Pivotal and Direct Inference
STA 4364H Conditional Inference: Sample Space Analysis
STA 4406H Statistical Inference for Stochastic Processes
STA 4412H Topics in Theoretical Statistics

Theoretical Astrophysics

Graduate Faculty

Full Members

J. R. Bond, BSc, MS, PhD, FRS, FRSC, Fellow CIAR, Fellow APS, University Professor (Director)

L. Kofman, MSc, PhD, Fellow CIAR

P. G. Martin, BSc MSc, PhD

N. W.. Murray, BS, PhD, Canada Research Chair

U.-L. Pen, BSc MSc PhD

A. C. Thompson, BS, PhD

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Introduction

CITA is a national institute specializing in theoretical astrophysics. It was established in 1984 and has the support of over fifty faculty members from about twenty Canadian universities. CITA is hosted by the University of Toronto which contributes to its ongoing support. Further major support is received from the Natural Sciences and Engineering Research Council. CITA is governed by a national council elected through the Canadian Astronomical Society.

In addition to its faculty, CITA maintains a rotating complement of more than a dozen post-doctoral fellows and research associates, and hosts an active program of visitors from other universities.

The Facility

CITA is housed in the Burton Tower of the McLennan Physical Laboratories, adjacent to the departments of Astronomy and Physics. CITA owns an extensive and powerful network of massively parallel computers and workstations.

Research Activities

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.

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.

Graduate Research Training

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 (e.g., Astronomy and Astrophysics, Chemistry, Physics). All CITA faculty hold cross-appointments in one or more of these departments, and inquiries by students seeking research supervision by CITA faculty are welcome. CITA research fellows and visitors are also encouraged to work with graduate students.

Theory and Policy Studies in Education TPS

Graduate Faculty

Full Members

S. S. Acker, BA, MA, PhD
S. Anderson, PhD
N. Bascia, BA, EdS, MA, PhD
(Chair)
M. Boler, BA, PhD
D. R. Boyd, BA, MEd, EdD
(Progam Coordinator, Philosophy)
M. Ford, BA, MA, PhD
J. Gaskell, BA, EdD
D. P. Hache, BA, BEd, MEd, MBA, PhD
R. E. Hayhoe, BA, MA, PhD
A. Hildyard, BSc, MA, PhD
G. A. Jones, BA, BEd, MEd, PhD
(Associate Dean, Academic)
R. Joshee, BA, MA, PhD
B.S. Kilbourn, BS, MA, PhD
D. W. Lang, BA, MA, PhD
(Progam Coordinator, Higher Education Group)
K. A. Leithwood, BA, BPE, MPE, PhD
D. C. Levine, BA, MA, PhD
J. L. Magnusson, BA, MA, PhD
C. L. Morgan, BA, MA, PhD
(Associate Chair; and
Program Coordinator, History)
K. Mundy, BA, MA, PhD, Canada Research Chair
L. J. Muzzin, BA, MA, MA, PhD
R. Ng, BA, MA, PhD
S. Padro, BA, MS, PhD
C. Pascal, BA, MA, PhD
J. Portelli, BA, MA, PhD
G. Regehr, BA, PhD
A. I. Rothman, BSc, MS, EdD
J. J. Ryan, BPE, BEd, MEd, PhD
M. L. Skolnik, BA, BPhil
E. M. Smyth, BA, BEd, MA, EdD
R. G. Tiberius, BSc, MA, PhD
H. M. Troper, BA, MA, PhD
B. Vigil Laden, BA, MA, PhD
M. Zuker, BA, LLB, MEd

Members Emeriti

D. G. Bogdan, BA, MA, PhD
J. E. Davis, BA, BEd, MEd, PhD
J. A. Eisenberg, BA, AM
S. B. Lawton, BA, MA, PhD
D. Misgeld, DPhil
L. R. Pierson, PhD
A. Prentice, BA, MA, PhD
R. G. Townsend, BA, MCP, PhD

Associate Members

M. Albert, BA, MSc, PhD
D. J. Allison
P. R. Amyotte
B. Applebaum, MA, PhD
P. Armstrong, BA, MA, PhD
P. Axelrod, BA, MA, PhD
H. P. Batty, MD, CCFP, MEd, FCFP
B. Brenzel, EdD, EdM, BEd, BA
W. B. Calder, Ed.D, MA., BSc
A. C. Chambers, BS, MS, EDD
A. Datnow, BA, PhD
H. Davis, BA, MA, PhD
V. Dhruvarajan, BA, MA, PhD
P. Dietsche, BSc, MA, PhD
J. G. Dimond, BA, MA, PhD
P. Draper, BA, MA, PhD
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M. Epp, BA, MA, PhD
J. Flessa, BA, MA, PhD
J. Frank, Bsc, MA
R. Giroux, BA, BPE, MEd, PhD
N. Gold, BA, LLB, LLM
D. Goldin Rosenberg, MES, PhD
R. A. Gordon, BA, MEd, MA, EDd, MPA
A. D. Gregor, BA, MA, PhD
M. Hatton, BA, MSEd, MBA, PhD
R. Hilliard, BA, MD, MEd, EdD
A. Hyman, BSc, MA, PhD
M. A. Jacobs, MA, PhD
C. L. James, BEd, MA, PhD
K. Janzen, BSc, MEd, EDd
D. Jopling, BA, PhD
C. LafleUr, BA, MA, PhD
H. Lane, MSc, PhD
V. LeBlanc, PhD, MSc BPs
B. Levin, BA, MEd, PhD
L. Lingard, BA, MA, PhD
G. A. Macdonald, RN, BScN, MEd, EdD
M. B. Mascall, BA, MA, PhD
(Program Coordinator, Educational Administration)
J. McMahon
J. Nyhof-Young, BSc MSc PhD
T. O'Banion, BA, MEd, PhD
J. Pan, BA, MEd, PhD
P. A. Poldre, MD, EdD, FRCP(C)
D. Raphael, BSc, MSc, PhD
R. Sandwell, BA, MA, PhD
M. Schmidt, BA, MEd, PhD
W. O. Seller, BA, MEd
C. Shapiro, BA, PhD
D. Sharpe
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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 M.Ed., M.A., Ed.D., and Ph.D. degrees. Members of the Department also participate in delivering the preservice teacher education program (B.Ed.), particularly the social foundations courses and courses rooted in educational history, philosophy, administration, and policy.

Application, General Admission, and Program Requirements

Applications must be made to one of 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) 923-6641 ext. 2430.

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.

Degree of Master of Education

At OISE/UT there are four options for completing the M.Ed. degree.

Option I
Course work and comprehensive option: ten half-courses plus a comprehensive examination/requirement.

Option II
Research project option: eight half-courses plus a research project or major research paper. Higher Education also requires a comprehensive examination.

Option III
Thesis option: six half-courses plus a thesis.

Option IV
Course work only option: ten half-courses.

Information about available options in each graduate program follow.

Educational Administration

The M.Ed. program in Educational Administration is designed primarily for students who are interested in learning the nature and practice of leadership in administration, policy, and planning.

Admission Requirements
In addition to the general requirements in the OISE/UT *Graduate Studies in Education Bulletin,* the criteria for admission to an M.Ed. degree program in Educational Administration are:
1 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;
2 an interest in the study and practice of administration;
3 academic qualifications beyond the first degree;
4 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
The M.Ed. degree may be pursued either part-time or full-time.

There are three options available to all students within the M.Ed. program in Educational Administration.

Option II comprises:
1 three required half-courses:
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 five other half-courses, of which at least two 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 five program strands: Policy, Leadership, Change, Social Diversity, or Ethics and Values;

3 a Major Research Paper (MRP) to be carried out under the guidance of a faculty member.

Option Ill comprises:

1 three required half-courses:

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 three other half-courses, 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;

3 a comprehensive thesis to be developed under the guidance of a faculty member.

Option IV comprises:

1 four required courses:

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.

2 Six other half courses, of which at least two must be in Educational Administration. Students may choose to focus on one of the four research areas: policy, leadership, change, and social diversity

Higher Education

Students in Higher Education pursue the M.Ed. Option I degree program (ten half-courses 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 will normally register in the M.Ed. Option II program (eight half-courses 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 Daniel Lang.

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

History of Education

The M.Ed. degree in History of Education may be pursued under either Option II (eight half-courses plus a major research project/paper) or Option IV (ten half-courses). Students enrolled in Option II are expected to take at least four half-courses in the History of Education; students enrolled in Option IV are expected to take at least five half-courses in History of Education. Completion of TPS 1460H *History and Educational Research* is mandatory in both options.

Philosophy of Education

The M.Ed. degree in Philosophy of Education may be pursued under either Option II (eight half-courses plus a major research project/paper) or Option IV (ten half-courses). Students enrolled in Option II are expected to take at least four half-courses in Philosophy of Education; students enrolled in Option IV are expected to take at least five half-courses in Philosophy of Education. 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 of Master of Arts

Educational Administration

The M.A. 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.

Admission to the M.A. program requires a 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.

The M.A. program consists of eight half-courses and a thesis. Additional courses may be required of some applicants. The M.A. is available through both full-time and part-time studies.

Higher Education

Admission to the M.A. program in Higher Education requires a 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 mid-B standing in the final year.

The M.A. program consists of eight half-courses, a general written comprehensive examination, and a thesis. Additional courses may be required of some applicants. All students are required to complete TPS 1803Y *Recurring Issues in Postsecondary 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

History of Education

Qualified applicants who hold a four-year University of Toronto bachelor's degree, or its equivalent, with a major in history may be admitted to a one-year M.A. program in History of Education comprising six half-courses and a thesis. Normally, four of the six half-courses must be selected from History of Education course offerings accepted for credit in this degree program. Course TPS 1419H is a requirement for students in this program.

Philosophy of Education

Qualified applicants who hold a four-year University of Toronto bachelor's degree, or its equivalent, with a major in philosophy may be admitted to a M.A. program in Philosophy of Education comprising six half-courses and a thesis. In this program, TPS 1440H *An Introduction to Philosophy of Education* is mandatory (unless it, or its equivalent, has been taken previously). Three of the remaining five courses should normally be in Philosophy of Education, selected in consultation with the faculty advisor. 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.

Degree of Doctor of Education

Educational Administration

The Ed.D. program in Educational Administration is designed to develop highly competent personnel for senior administrative positions in school systems, colleges, universities, and other educational institutions and agencies, and for academic positions in universities and colleges. The program is designed to satisfy the needs of practising and aspiring educational administrators and academics who, because of the increasing complexity of problems related to the operation of educational organizations, have recognized the need for further professional education. The emphasis is on developing skills in the application of knowledge from theory and research to practical administrative problems. To accomplish this, the program is flexibly designed and involves numerous collaborative experiences among faculty members, students, and administrators.

Admission Requirements

In addition to the general requirements given in the OISE/UT Graduate Studies in Education Bulletin the Educational Administration program specifies the following:

1 The applicant should hold a master's degree with specialization in Educational Administration from the University of Toronto, or an equivalent degree. Additional course work will be required of those who do not have a background in administrative studies.

2 The applicant must have had a successful leadership experience in education or must show potential for leadership. Evidence of this will be provided by at least one letter of refer-

ence secured by the applicant from a senior administrator under whom the applicant has worked, commenting on the applicant's
a achievement in identifying and solving educational problems,
b ability to work with people,
c leadership style, and
d awareness of current social and educational issues.
3 The applicant must also furnish at least one letter of reference from a professor with whom the applicant has studied, commenting on the applicant's scholarly achievement.

Program Requirements
The Ed.D. program is organized into six complementary components:
1 Ed.D. core seminars, which consist of TPS 3040H and TPS 3041H, that apply theoretical knowledge to problems likely to be experienced by senior administrators in educational organizations;
2 two of the following three half-courses or their equivalents: TPS 3042H, TPS 3043H, or TPS 3044H. TPS 3044H is the administrative internship/practicum program;
3 two further courses in Educational Administration at the 3000 level;
4 elective courses; two are required, although more may be taken. It is suggested that at least one elective be taken outside of the Educational Administration program;
5 a comprehensive examination;
6 a thesis proposal hearing;
7 a doctoral thesis.

Higher Education
The requirements for the Ed.D. degree program in Higher Education include a minimum of eight half-courses beyond a relevant and acceptable M.Ed. or M.A. 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. Normally the minimum requirements will include:
1 TPS 1803Y Recurring Issues in Postsecondary Education (full course);
2 at least two other half-courses in Higher Education;
3 a half-course in research methodology approved by the faculty advisor;
4 one half-course 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;
5 a supervised applied research practicum (equivalent to one half course);
6 a collaborative pro-seminar (equivalent to one half-course);
7 a written General Comprehensive Examination (if not completed previously);
8 a Doctoral Specialization Examination;
9 a thesis reporting the results of original research on an applied topic in postsecondary 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

History of Education
The Ed.D. degree program in History of Education is designed for career educators who wish to engage in the in-depth study of a problem or topic related to professional practice.

The degree requirements (for candidates who have a master's degree equivalent to the History of Education M.Ed. or M.A.) consist of eight half-courses, a year of full-time study on campus, and a thesis. Preferably, the resident year should occur late in the degree program and should be devoted primarily to thesis research and writing.

The core program includes two mandatory Ed.D. seminars (TPS 3490H Ed.D. Seminar in the History of Education I and TPS 3491H Ed. D. Seminar in the History of Education I/), normally taken during the resident year. 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 two half-courses before the resident year.

All Ed.D. students who began their program after July 1, 1992, are required to take a comprehensive examination.

Philosophy of Education
The Ed.D. degree program in Philosophy of Education is designed for career educators who wish to engage in the in-depth study of a problem or topic related to professional practice. 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.

The minimum Ed.D. degree requirements (for candidates who hold a master's degree equivalent to the Philosophy of Education M.Ed. or M.A.) consist of eight half-courses (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 Ed.D. students are required to take a comprehensive examination.

The core program includes two mandatory Ed.D. seminars (TPS 3480H Ed.D. Seminar in the Philosophy of Education I and TPS 3481H Ed. D. Seminar in the Philosophy of Education 10, 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). Three of the remaining five courses should normally be in Philosophy of Education, 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. Students are strongly encouraged, though not required, to take at least two half-courses before the year of required full-time study.

Degree of Doctor of Philosophy

Educational Administration

The Ph.D. 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 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 Ph.D. 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.

Admission to the Ph.D. program requires prior completion of the University of Toronto M.A. degree or its equivalent, with standing equivalent to a University of Toronto A minus. 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 Ph.D. Admissions Committee. Before undertaking a qualifying research project, students should first consult the Program Coordinator.

The program comprises at least six new half-courses, four of which 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.

Ph.D. candidates are required to pass a comprehensive examination and a thesis proposal hearing. A thesis is required.

Higher Education

The requirements for the Ph.D. degree program in Higher Education include a minimum of six half-courses beyond a relevant and acceptable M.Ed. or M.A. 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. Normally the minimum requirements will include:

1 TPS 1803Y Recurring lssues in Postsecondary Education (full course);
2 at least two other half-courses in Higher Education;
3 a half-course in research methodology approved by the faculty advisor;
4 one half-course 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;
5 a written General Comprehensive Examination (if not completed previously);
6 a Doctoral Specialization Examination;
7 a thesis reporting the results of original research in postsecondary education.

Collaborative Programs

Interested Higher Education program students may also enrol in the following Collaborative Programs:

1 Comparative, International, and Development Education
2 Women's Studies

For more details, consult the separate entries in this calendar.

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

History of Education

Qualified applicants with a University of Toronto M.A. degree in History of Education, or its equivalent, including a thesis or equivalent major research paper, may be admitted to a Ph.D. program comprising six half-courses 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 master's degree with specialization in History of Education will be required to establish equivalency with the OISE/UT master's program. Usually this entails the addition of courses beyond the minimum six half-courses required for the Ph.D. Course TPS 1419H Historiography and the History of Education is a requirement for students in this program. Applicants who have taken graduate courses with substantial history of education content in any of several related disciplines in the humanities and social sciences should submit descriptions of such courses with their applications to help determine equivalency of the number of additional courses to be taken.

All Ph.D. candidates are required to write a comprehensive examination.

Philosophy of Education

Qualified applicants with a University of Toronto M.A. degree in Philosophy of Education or its equivalent (including a thesis or equivalent major research paper) may be admitted to a Ph.D. program comprising six half-courses plus a thesis. In this program, TPS 1440H An Introduction to Philosophy of Education is mandatory (unless it, or its equivalent, has been taken previously). Three of the remaining five courses should normally be in Philosophy of Education, 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.

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 master's degree with specialization in philosophy of education will be required to establish equivalency with the OISE/UT master's program. Usually this entails the addition of courses beyond the minimum six half-courses required for the Ph.D.

All Ph.D. candidates are required to write a comprehensive examination.

Courses of Instruction

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/S. Padro, J. J. Ryan, D. Hache
TPS 1004H Research Literacy in Educational Administration/S. Padro, Staff
TPS 1005H The Computer in Educational Administration/S. Padro
TPS 1012H Organizational Culture and Decision Making/Staff
TPS 1013H Supervisory Relationships/Staff
TPS 1016H School Program Development and Implementation/S. Anderson
TPS 1017H Educational Finance and Economics/D. Lang
TPS 1018H Political Skill in the Education Arena/Staff
TPS 1019H Diversity and the Ethics of Educational Administration/J. Portelli
TPS 1020H Teachers and Educational Change/B. Mascall, *N.* Bascia
TPS 1023H Interpersonal Relations in School Systems/Staff
TPS 1024H Critical Conversations: Philosophy, Educational Administration, and Educational Policy Studies/ J. Portelli
TPS 1025H School Effectiveness and School Improvement/D. Hache
TPS 1026H Evaluation of Professional Personnel in Education/Staff
TPS 1027H The Search for Educational Quality and Excellence in a Global Economy/D. Hache
TPS 1028H Policy Delivery and Schools/ N. Bascia, Staff
TPS 1029H Special Applications of the Administrative Process/Staff
TPS 1030H The Legal Context of Education/ M. A. Zuker

TPS 1036H Planning in Educational Organizations/S. Padro
TPS 1040H Educational Administration I: Introduction to Educational Administration: Policy, Leadership and Change/J. J. Ryan, J. Portelli, N. Bascia
TPS 1041H Educational Administration II: Social and Policy Context of Schooling/S. Padro, J. J. Ryan, R. Joshee, D. Hache, B. Mascall
TPS 1042H Educational Leadership and Cultural Diversity/J. J. Ryan
TPS 1045H Language Policy Across the Curriculum/Staff
TPS 1047H Managing Changes in Classroom Practice/S. Anderson, Staff
TPS 1048H Educational Leadership and School Improvement/B. Mascall
TPS 1052H Individual Reading and Research in Educational Administration: Master's Levellstaff
TPS 3017H Problems in the Finance and Economics of Education/Staff
TPS 3018H Governing Education: A Seminar on Politics/Staff
TPS 3020H Educational Change in the Post-Modern Age/N. Bascia
TPS 3022H The Investigation of School Culture: An Examination of the Daily Life of Schools/J. Ryan
TPS 3024H Field Studies in Educational Leadership/J. J. Ryan
TPS 3025H Personal and Professional Values of Educational Leadership/Staff
TPS 3028H Project Development Studied Staff
TPS 3029H Special Topics in Educational Administration/Staff
TPS 3030H Advanced Legal Issues in Education/M. Zuker
TPS 3037H Strategic Planning in Educational Organizations/S. Padro
TPS 3040H Administrative Theory and Educational Problems I: People and Power in Organizations/J. J. Ryan, Staff
TPS 3041H Administrative Theory and Educational Problems II: Doctoral Seminar on Policy Issues in Education/S. Padro, R. Joshee. Staff
TPS 3042H Field Research in Educational Administration/J. J. Ryan
TPS 3043H Survey Research in Educational Administration/Staff
TPS 3044H Internship/Practicum in Educational Administration/Staff
TPS 3045H Educational Policy and Program Evaluation/N. Bascia
TPS 3046H Gender Issues in Educational Leadership/N. Bascia
TPS 3047H Research Seminar on Leadership and Educational Change/Staff
TPS 3052H Individual Reading and Research in Educational Administration: Doctoral Levellstaff
TPS 3055H Democratic Values, Student Engagement and Democratic Leadership/ J. Portelli
JCT 2000H Proseminar in Educational Evaluation, Measurement and Policy Analysis/R. Wolfe
JCT 2001H Using Classroom Assessment to Enhance Student Learning/R. Childs

Higher Education

TPS 1801H The History of Higher Education in Canada: An Overview/Staff
TPS 1802Y Theory in Higher Education/ L. Muzzin
TPS 1803Y Recurring Issues in Postsecondary Education/Staff
TPS 1804H Issues in Medical/Health Professional Education/Staff
TPS 1805H The Community College/ M. Skolnik, B. V. Laden
TPS 1806H Systems of Higher Education/ G. A. Jones
TPS 1807H Strategic and Long-Range Planning for Postsecondary Systems/D, W. Lang
TPS 1808H Research in Health Professional Education/Staff
TPS 1809H Administration of Colleges and Universities/D. W. Lang
TPS 181OH Evaluation of Knowledge, Clinical Competence, and Professional Behaviour in the Health Professions/staff
TPS 1811H Institutional Research and Planning/D. W. Lang
TPS 1812H Education and the Professions/ L. J. Muzzin
TPS 1813H Issues in Cognitive and Educational Psychology: Implications for Health Professional Education/ G. H. Regehr
TPS 1814H Curriculum in Institutions of Higher Education/J. L. Magnusson
TPS 1815H Teaching in Institutions of Higher Education/Staff
TPS 1817H Nurturing Professional Education/ L. Muzzin

TPS 1818H Educational Development: Examination of Strategies for Improving Teaching and Learning in Postsecondary Institutions/Staff
TPS 1819H Governance in Higher Education/ M. L. Skolnik
TPS 1820H Special Topics in Higher Education: Master's Levellstaff
TPS 1821H Institutional Differentiation in Postsecondary Education/M. L. Skolnik
TPS 1822H The Idea of the University and the College/Staff
TPS 1824H The Planning of Facilities in Higher Education/Staff
TPS 1825H Comparative Education: Theory and Methodology/R. E. S. Hayhoe
TPS 1826H Comparative Higher Education/ R. E. S. Hayhoe
TPS 1827H The Politics of Higher Education/ G. A. Jones
TPS 1828H Evaluation in Higher Education/ J. L. Magnusson
TPS 1829H Higher Technological Education and Training: A Comparative Perspective/Staff
TPS 1830H Systematic Educational Planning for the Health Professions: Part I: Overview/Staff
TPS 1831H Systematic Educational Planning for the Health Professions: Part II: Further Development/Staff
TPS 1832H East Asian Higher Education/ R. E. S. Hayhoe
TPS 1841H Public Finance and Higher Education/D. Lang
TPS 1842H Higher Education and the Labour Market/Staff
TPS 1843H Higher Education and the Law/ M. A. Zuker
TPS 1852H Individual Reading and Research in Higher Education: Master's Levellstaff
TPS 3806H Case Studies in Comparative Higher Education/Staff
TPS 3810H International Academic Relations/ R. E. S. Hayhoe
TPS 3820H Special Topics in Higher Education: Doctoral Levellstaff
TPS 3852H Individual Reading and Research in Higher Education: Doctoral Levellstaff

History of Education

TPS 1400H The Origins of Modern Schooling I: Problems in Education Before the Industrial Revolution/ D. Levine
TPS 1401H The Origins of Modern Schooling II: Problems in Nineteenth- and Twentieth-Century Educational History, Focus on Canada and the U.S.A./H. M. Troper
TPS 1402H History of Modern European Education/Staff
TPS 1403H History of Education in Canada/ E. M. Smyth
TPS 1404H History of Rural Education in Canada/R. Sandwell
TPS 1405H History of Education and Society: Selected Topics/D. Levine, H. M. Troper
TPS 1406H Sexuality and the History of Education/D. Levine
TPS 1415H The History of the Teaching Profession/Staff
TPS 1416H Ontario Education/E. M. Srnyth
TPS 1418H The Role of Education in Theories of Women's Emancipation I/ Staff
TPS 1419H Historiography and the History of Education/ D. Le vine
TPS 1420H European Popular Culture and the Social History of Education: I/D. Levine
TPS 1421H The History of Women and Education/D. Levine, C. L. Morgan
TPS 1422H Education and Family Life in the Modern World *I/D.* Levine
TPS 1423H The History of the Family in Canada/R.. Sandwell
TPS 1424H Religion, Ideology, and Social Movements in the History of North American Education/H. M. Troper
TPS 1425H Class Formation and Its Relation to the Schools/C. L. Morgan
TPS 1426H The History of Gender and Education in Canada/C L. Morgan
TPS 1427H History and Commemoration: Canada and Beyond, 1800s-1900s/C. L. Morgan
TPS 1428H Immigration and the History of Canadian Education/H. M. Troper
TPS 1429H Ethnicity and the History of Canadian Education/H. M. Troper
TPS 1430H Gendered Colonialisms, Imperialisms and Nationalisms in History/C. L. Morgan

TPS 1448H Popular Culture and the Social History of Education II/C. L. Morgan
TPS 1452H Individual Reading and Research in the History of Education: Master's Level/Staff
TPS 1460H History and Educational Research/Staff
TPS 1461H Special Topics in History of Education/Staff
TPS 3423H Education and Family Life in the Modern World II/D. Levine
TPS 3428H Minority Concerns and Education in Canadian History: Selected Topics/H. M. Troper
TPS 3452H Individual Reading and Research in the History of Education: Doctoral Levellstaff
TPS 3461H Special Topics in History of Education/Staff
TPS 3490H Ed.D. Seminar in the History of Education II/Staff
TPS 3491H Ed.D. Seminar in the History of Education II/Staff
TPS 3494H Doctoral Practicum in the History of Education I/Staff
TPS 3495H Doctoral Practicum in the History of Education II/Staff

Philosophy of Education

TPS 1431H Theory of Knowledge in Educational Inquiry and Cognitive Science/Staff
TPS 1432H Knowledge, Mind, and Human Beings/Staff
TPS 1433H Freedom and Authority in Education/Staff
TPS 1434H Human Rights, Politics, and Education/Staff
TPS 1435H Democracy and Education/Staff
TPS 1436H Modernity and Postmodernity in Social Thought and Education/ Staff
TPS 1437H Philosophical Aspects of the Development of Language and Thought/Staff
TPS 1438H Democratic Approaches to Pedagogy/ J. Portelli
TPS 1439H Gender, Ethics, and Education: Philosophical Issues/Staff
TPS 1440H An Introduction to Philosophy of Education/D. R. Boyd
TPS 1441H Philosophical Dimensions of Moral Education/D. R. Boyd
TPS 1442H Cultural and Racial Difference in Education: Philosophical Perspectives/D. R. Boyd
TPS 1444H Human Rights and Education in an International Context//Staff
TPS 1446H The Teacher as Philosopher/ O. R. Boyd
TPS 1447H Technology in Education: Philosophical Issues/Staff
TPS 1449H The Theory of Law and the Teaching of Law in the Schools/ Staff
TPS 1450H Philosophy of Science and Science Education/Staff
TPS 1453H Individual Reading and Research in the Philosophy of Education: Master's Levellstaff
TPS 1459H Creativity and Education/Staff
TPS 1462H Women, Literature, and Educationl/Staff
TPS 1465H Special Topics in Philosophy of Education/Staff
TPS 1471H Critical Issues in Education: Philosophical Perspectives/D. R. Boyd
TPS 1482H The Nature and Development of Religious Knowledge in Education/Staff
TPS 1484H Philosophy of Literature and Literature Education/Staff
TPS 1485H Literature and Values in Education//Staff
TPS 1487H Critical Discourses of Musical Experience and Education/Staff
TPS 1488H Feminist Theory, Musical Experience, and Music Education/Staff
TPS 3417H Research Seminar in Feminist Criticism, Aesthetics, and Pedagogy/M. Boler
TPS 3436H Aesthetics and Education/Staff
TPS 3441H Research Seminar in Moral Education: Part IID. R. Boyd
TPS 3443H Research Seminar in Moral Education: Part IVD. R. Boyd
IPS 3447H Theories of Modernity and Education I/Staff
TPS 3453H Individual Reading and Research in the Philosophy of Education: Doctoral Levellstaff
TPS 3465H Special Topics in Philosophy of Education/Staff
TPS 3480H Ed.D. Seminar in the Philosophy of Education I/Staff
TPS 3481H Ed.D. Seminar in the Philosophy of Education II/Staff
TPS 3484H Doctoral Practicum in the Philosophy of Education I/Staff
TPS 3485H Doctoral Practicum in the Philosophy of Education II/Staff

Toxicology, Biomedical (Collaborative Program)

Program Committee

H. P. Elsholtz, BSc, MSc, PhD/Laboratory Medicine & Pathobiology
F. Liu, MD, FRCP(C)/Medical Science
T. M. Wolever, BA, BM, BCh, MA, MSc, PhD, DM/ Nutritional Sciences
P. J. O'Brien, BSc, MSc, PhD/Pharmaceutical Sciences
D. M. Grant, BSc, PhD/Pharmacology
D. S. Riddick, BSc, PhD/Pharmacology
C. Woodland, BSc, MSc, PhD/Pharmacology (Director)
D. Jackson, BSc MSc, PhD/Zoology

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Web: www.utoronto.ca/grdpharm/biomed.htm

Nature of the Collaborative Program

The graduate units of Laboratory Medicine and Pathobiology, Medical Science, Nutritional Sciences, Pharmaceutical Sciences, Pharmacology, and Zoology participate in the Collaborative Graduate Program in Biomedical Toxicology. Students may pursue an M.Sc. or Ph.D. degree. Departments and institutes 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.

Admission Requirements

Candidates 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 accepted by one of the participating home departments under its regulations and then register in the Collaborative Program in Biomedical Toxicology with the Program Director. Students planning to begin the program in September should register with the Program Director by October 15; students planning to begin in January should register by January 31.

Program Requirements

Students must 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. A copy of the final thesis or project must be submitted to the Program Director.

Master of Science

Students are required to take JNP 1014Y *Interdisciplinary Toxicology* and JNP 1016H *Graduate Seminar in Toxicology.* In addition, students must attend a minimum of six academic seminars related to toxicology during their program.

Doctor of Philosophy

Students are required to take JNP 1014Y *Interdisciplinary Toxicology;* JNP 1016H *Graduate Seminar in Toxicology,* plus a half-course equivalent (approved by the Director of the Collaborative Program) in a general area of toxicology. In addition, students must attend a minimum of 12 academic seminars related to toxicology during their 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.

Detailed program information is available on the Web at www.utoronto.ca/grdpharm/biomed.htm and from the Department of Pharmacology .

Graduation Requirements

In consultation with the Director of the Collaborative Program in Biomedical Toxicology, the home department recommends to the School of Graduate Studies that a candidate should graduate following successful completion of the above program requirements. Upon successful completion, the student receives, in addition to the master's or Ph.D. degree in their departmental area, a notation on the transcript reading "Completed M.Sc. Collaborative Program in Biomedical Toxicology" or "Completed Ph. D. Collaborative Program in Biomedical Toxicology".

Urban and Community Studies

Graduate Faculty

Full Members

C. M. Corter, BA, PhD
A. Daniere, MPP, PhD, MCIP
E. Fong, BA, MA, PhD
U. George, BEd, BSc, MA, MA, PhD, Royal Bank Chair in Applied Social Work Research
R. Hackworth, BA, MA, MEP, PhD
J. D. Hulchanski, BA, MSc(PI), PhD, MCIP, Chow Yei Ching Social Work Chair in Housing (Director)
P. McCarney, BA, MCP, PhD
J. R. Miron, BA, MA, MSc, PhD
J. E. Quarter, BA, MA, PhD
J. W.. Salaff, BA, MA, PhD
D. Schugurensky, BEd, MEd, PhD
R. E. Stren, BA, MA, PhD
V. S. Tarasuk, BA, BEd, BASc, MSc, PhD
B. S. Wellman, BA, MA, PhD

Members Emeriti

L. S. Bourne, BA, MA, PhD, FRSC, MCIP, Hon Causa

Associate Members

M. Hess, BA, MUP, PhD
I. Sakamoto, BA, MA, MSW, MS, PhD

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The Centre for Urban and Community Studies promotes and disseminates multidisciplinary research and policy analysis on urban issues.

Its activities are intended to contribute to scholarship on questions relating to the social and economic well-being of people who live and work in urban areas large and small, in Canada and around the world.

The Centre was established in 1964 as a research unit of the School of Graduate Studies. Its research associates include professors and graduate students from a dozen different disciplines and professionals from a variety of organizations.

The Centre's mandate is to:

- bring together faculty, professionals, and graduate students interested in urban development, policy issues and the quality of life in cities;
- encourage interdisciplinary scholarly research on urban issues;
- support this research by providing academic staff and students with space, access to services and information, opportunities for collaboration, seminars and conferences, and graduate research internships;
- disseminate ideas related to urban and community studies to other researchers and to agencies and organizations interested in urban matters by publishing books, reports, bibliographies, and research bulletins;
- improve communications among researchers and between researchers and the broader urban community.

Several formal working groups are currently active within, or are associated with, the Centre. These include:

- U of T Urban International, which provides multi-year support for research projects on international development;
- Childcare Resource and Research Unit;
- NetLab, which studies computer, communication, and social networks;
- Housing New Canadians Research Working Group;
- Community Development Research Network;
- Cities Lab, which studies urban growth, urban structure, and neighbourhood change;
- Urban Systems Research Lab, and
- Urban Entomology Program.

Although the Centre has no formal degree responsibilities, its faculty members all contribute to graduate programs in their home departments. Research activities in the Centre comprise both major programs, intended as areas of continuing interest involving an interdisciplinary team approach, and more focused, shorter-term projects, often undertaken by one or two people.

Current research themes include: housing markets and Canadian housing policy; urbanization and urban management in developed and developing countries; urban environment and sustainability; social networks and urban communities; computer and social networks; social and spatial polarization; immigrant settlement; child care, women and labour force participation; municipal administrative development; urban systems, urban growth and changing metropolitan form in Canada; urban public transport; geographic

information systems and urban policy; regional policy and regional development.

The Centre maintains close working relationships with research programs and academic units both within and outside the University that have similar interests. Associate membership in the Centre is held by members of the University or the affiliated community engaged in urban research.

One of the main functions of the Centre is to make available academic research on urban affairs. It publishes research papers, bulletins, monographs, and books, and offers shorter papers and bulletins through its Web site. Publications lists and a brochure describing its activities and programs are available from the Centre.

For graduate students the Centre offers seminars on a wide range of urban and social science topics, the opportunity to publish papers in the Centre's series, access to publications and conferences at a reduced price, research training and assistantships, and information on data sources and research opportunities.

The Centre welcomes visiting researchers, including professors and professionals on research leave, as well as students with postdoctoral fellowships. The Centre is unable to offer funding to visitors, but can provide office space, Internet connections, and access to the University of Toronto's library system.

Women's Studies (Collaborative Program)

Program Committee

S. Mojab, MEd, PhD/Adult Education & Counselling Psychology (Director)
L. E. Stermac, BSc, MA, PhD/Adult Education & Counselling Psychology
B. S. McElhinny, PhD/Anthropology
A. Keith, BA, PhD/Classics (Coordinator of Graduate Studies)
J. A. Fleming, BA, MA, PhD/Comparative Literature
N. S. Wortley, BA, MA, PhD/Criminology
D. McDougall, BEd, BM, EdD/Curriculum, Teaching & Learning
E. K. Armatage, BA, MA, PhD/Drama
P. Sperdakos, BA, MA, PhD/Drama
E. D. Harvey, BA, MA, PhD/English
M. E. Nyquist, BA, MA, PhD/English
C. D. Rodgers, BPE, MHK, PhD/Exercise Sciences
L. C. Kerslake, AM, PhD/French
R. D. Lewis, BA, MA, PhD/Geography
R. W. Cockerill, BA, MA, PhD/Health Policy, Management & Evaluation
A. R. Greer, BA, MA, PhD/History
C. M. Murphy, BA, PhD/History
C. Beghtol, BA, MLS, PhD/Information Studies
D. Dyzenhaus, BA, LLB, DPhil, FRSC/Law
K. A. Rittich, MusBac, LLB, SJD/Law
S. C. Akbari, BA MA, MPhil, PhD/Medieval Studies
T. P. Harrison, BA, PhD/Near & Middle Eastern Civilizations
E. H. Peter, BScN, BA, MScN, PhD/Nursing Science
J. R. Brown, BA, MA, PhD/Philosophy
K. P. Morgan, BA, MA, MEd, PhD/Philosophy
J. R. Nedelsky, BA, MA, PhD/Political Science
D. M. Rayside, BA, AM, PhD/Political Science
K. Domnick, BA, CPH, MSc/Public Health Sciences
P. Klassen, BA, MA, MPhil, PhD/Religion
L. McDonald, BA, MSW, PhD/Social Work
J. Taylor, BA, PhD/Sociology
S. Welsh, BA, MA, PhD/Sociology
M. E. Eichler, MA, LLD, PhD/Sociology & Equity Studies in Education
A. Trotz, BA, MPhil, PhD/Sociology & Equity Studies in Education
J. Blackmore, BA, MA, PhD/Spanish
C. L. Morgan, BA, MA, PhD/Theory & Policy Studies in Education

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Nature of the Collaborative Program

Graduate units from the Humanities, Social Sciences, and Life Sciences participate in the Graduate Collaborative Program in Women's 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 Institute for Women's Studies and Gender Studies (IWSGS).

The Graduate Collaborative Program in Women's Studies (GCWS) provides a formal educational context for the pursuit of interdisciplinary research in women's 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 women's studies research through student and faculty research seminars, colloquia, circulation of work in progress, study groups, conferences, and publications. GCWS contributes to the development of an integrated research community in women's studies at the University of Toronto.

The Graduate Collaborative Program in Women's Studies brings together 26 graduate units providing more than 100 courses and involving over 100 faculty. Candidates 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. Students who successfully complete the requirements of the collaborative program will receive the notation "Completed Collaborative Program in Women's Studies" on their transcript, in addition to the master's or doctoral degree from their home graduate unit.

Programs of study should be planned in consultation with the GCWS 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. Theses will be supervised and evaluated in the same manner as those in the home graduate unit. Normally, at least one graduate faculty member affiliated with GCWS will be a member of the thesis or supervisory committee of students in the program.

Admission Requirements

- familiarity with the approaches and methodologies associated with scholarship in women's studies, OR
- extensive familiarity with women's studies scholarship in a single discipline or a cognate set of disciplines

Collaborating units send to GCWS a copy of all student files (application, offer of admission, etc.)

The GCWS Committee reviews the file and, if approved, a letter of acceptance outlining the course requirements for the Program, is sent to the candidate and the collaborating unit.

To be submitted to GCWS:

1 Non-Thesis Master's

- ensure that your graduate application file is forwarded from the home graduate unit
- two-page statement of research intent explaining how your program of study and specific research interests relate to women's studies at the master's level

2 Thesis Master's

- ensure that your graduate application file is forwarded from the home graduate unit
- two-page statement of research intent for thesis in women's studies
- two letters of reference outlining your background in women's studies

3 Doctor of Philosophy

To be considered for admission to the Graduate Collaborative Program in Women's Studies at the doctoral level, applicants must demonstrate extensive familiarity with relevant scholarship in women's studies at both the undergraduate and graduate levels. Applicants who lack a strong background in the field of women's studies may be required to do special course work to qualify.

To be submitted to GCWS:

- ensure that your graduate application file is forwarded from the home graduate unit
- two-page statement of research intent explaining how your program of study and specific research interests relate to women's studies at the doctoral level
- two letters of reference outlining your background in women's studies

4 Ad hoc arrangements are possible with non-collaborating departments.

Program Requirements

Master's Degrees

1 *Non-Thesis Master's Degree*

- JPW 2118H *Philosophical Foundations of Women's Studies or equivalent*
- one full course (Y course) or two half-courses (H courses) selected from the cross-listed courses in GCWS

2 Thesis Master's Degree

- JPW 2118H *Philosophical Foundations of Women's Studies* or equivalent
- one half-course (H course) selected from the cross-listed courses in GCWS
- the thesis, or major paper, dealing with a subject in the field of women's studies

Doctoral Degrees

- JPW 2118H *Philosophical Foundations of Women's Studies* or equivalent (if not already completed)
- JPW 3000H *Advanced Research Seminar*
- one half-course (H course, not taken previously) from the list of cross-listed courses in GCWS
- the doctoral thesis dealing with ***a*** subject in the field of women's studies

Courses of Instruction

Required Courses

JPW 2118H Philosophical Foundations of Women's Studies/K. Morgan

JPW 3000H Advanced Research Seminar in Women's Studies/A. *Keith*

Cross-listed Courses

Women's studies courses 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/A. Miles

AEC 1113H Gender and Hierarchy at Work/ K. Mirchandani

AEC 1143H Introduction to Feminist Perspectives on Society and Education/ A. R. Miles, Staff

AEC 1146H Women, Globalization, and Citizenship/S. Mojab

AEC 1156H Power and Difference in the Workplace/S. Mojab

AEC 1207H Counselling Topics in Sexual Orientation and Gender Identity Diversity/J. R. Gillis
AEC 1253H Feminist Issues in Counselling Psychology and Psychotherapy/ L. Stermac, Staff
AEC 1254H Contemporary Issues in Human Sexuality and Sex Education/ M. Schneider
AEC 1257H Females' Psychological Development/Staff
AEC 3119H Global Perspectives on Feminist Education, Community Development, and Community Transformation/A. R. Miles, Staff
AEC 3126H Transformative Education and the Global Community: Creativity and Social Change/€. V. O'Sullivan, Staff
AEC 3132H Special Topics in Women in Development and Community Transformation/Dame N. Barrow (Distinguished Visitor)
AEC 3181H Ferminist Standpoints: Critical and Post-Structural Approaches/ A. Miles

Anthropology
Student must complete "Individual Reading and Research Course Form" before enrolling (available from department)
ANT 5146H Colonial and Postcolonial Discourses / I.Kalmar
ANT 6050H Reading Course in Specific Area and Theory I/Staff
ANT 6051H Reading Course in Specific Area and Theory II/Staff
ANT 6052Y Reading Course in Specific Area and Theory III/Staff
ANT 7001H Medical Anthropology I
ANT 7002H Medical Anthropology II
JAL 1155H Language and Gender/ B. McElhinny

Comparative Literature
COL 5025H Feminism and Postmodernism/ B. Havercroft
COL 5032H Feminist Approaches to Medieval Literature/J. Ross

Criminology
CRI 1020H Law and Society: Theoretical Perspectives/Staff

Curriculum, Teaching and Learning
CTL 1012H Curriculum for Girls and Young Women: Historical and Contemporary Issues/E. Smyth
CTL 1309H Les stereotypes sexuels dans les programmes scolaires/D. Gerin-Lajoie
CTL 1313H Gender Equity in the Classroom/ Staff
CTL 1840H Gender Issues in Mathematics, Science, and Technology/ M. Nieswandt

Drama
DRA 1002H History of the Theatre II/ N. Copeland
DRA 4057H Women Script History/ N. Copeland

English
ENG 1013H Women in Medieval Literature: Image and Author/S. C. Akbari
ENG 1017H Body and Identity in Middle English Literature/S. C. Akbari
ENG 4607H The Brontes/J. L. Matus
ENG 5048H "Raciness": Race and Sexuality in American Politics, Literature, and CriticismlM. Cobb
ENG 5658H Virginia Woolf: Essays and Short Fiction/M. J. A. Cuddy-Keane
ENG 6525Y Skin and Blood: Imperialism Discourse of 'Race'/D. Justice, S. Salih
ENG 6803H Intertextuality in Feminist Cinema: Talking Back to Patriarchal Texts/ C. Columpar
ENG 6813H The Textuality of the Body/ C. Columpar

Exercise Sciences
EXS 5519H Theories of the Body and Transcendence/B. Pronger

French Language and Literature
FRE 2035H Autour de l'intime en France: les recits contemporaines des femmes/B. Havercroft
FRE 2036H Configurations du genre sexuel dans la prose contemporaine des femmes/B. Havercroft
FRE 2105H Ecritures du moi: de la representation textuelle a la representation visuelle du sujet ecrivant/J. LeBlanc

Geography
GGR 1504H Health, Place and Difference/ K. Wilson
GGR 1714H Cultural and Critical Geographies/ E. Gilbert
GGR 1801H Social Identities and Space/Staff

JPG 1506H State/Space/Difference: Understanding the New Social Geography of the Statel S. Ruddick
JPG 1509H Gender, Place, and the Politics of Development/K.N. Rankin
JPG 1810H Globalization and Postmodernism/K. Goonewardena

Health Policy, Management and Evaluation
JNH 5001H Health Care Settings: Issues, Concepts, Measures, and Policies/P. C. Coyte, P. McKeever

History
HIS 1016H Readings in the History of Gender and Sexuality/€. Brown, M. Murphy
HIS 1101H Race and Gender in the Northern Colonies of North America/ J. Noel
HIS 1153H Topics in Women's History/ S. Van Kirk
HIS 1230H The Sexes in the Western World/ J. Abray
HIS 1245H Women in Early Modern Europe/ B. Todd
HIS 1533H Gender and International Relations (joint graduate/undergraduate)/C. Chin
HIS 1665H Gender and History in Colonial South Asia/M. Kasturi

Information Studies
FIS 1330H Archives Concepts and Issues
FIS 2010H Reading Course/Staff
FIS 2011H Reading Course/Staff
FIS 2174H History of Records and Records-Keeping

Law
LAW 294H International Human Rights Law/ M. P. Macklem
LAW 301H International Women's Rights/R. J. Cook
LAW 334H Feminist Theory: Challenges to Legal and Political Thought/J. Nedelsky
LAW 372H Judgement in Law and Politics/ J. Nedelsky
LAW 386H Reproductive Health Law/R. J. Cook, B. M. Dickens

Medieval Studies
MST 3101H Current Theory and Medieval Texts: An Introduction/ D. Townsend
MST 3102H Topics in Current Theory and Medieval Texts (Courses with prerequisites)/D. Townsend
MST 3111H Female Spirituality in Late Medieval England: Practices, Practitioners, and Texts/A. Hutchison

Near and Middle Eastern Civilizations
NMC 1608H Life Cycle and Personal Status in Judaism/T: Meacham
NMC 1609Y Gender Issues in Jewish Law and Religion/T. Meacham
NMC 2035Y Women and Writing in Twentieth-Century Iran/R. Sandler

Nursing Science
JNH 5002H The Body, Health Care, Technology and Place
NUR 1021 H Nursing Ethics/E. Peter
NUR 1039H Women's Health Across the Lifespan/K. Hardie
NUR 1040H Issues in Women's Health Care/ J. Angus
NUR 1043H Theories of Interpersonal Process/R. Gallop
NUR 1058H Aging, Gender and Equity

Philosophy
PHL 2140H Feminist Philosophy/Staff

Political Science
JPJ 2049H International Women's Rights Law
POL 2024Y Feminist Theory/J. Nedelsky
POL 2032H Judgement in Law and Politics/ Staff
POL 2037H Law, Religion and Public Discourse/J. Nedelsky, *R.* Hutchinson
POL 2038H Problems of Pluralism and Equality/M. S. Williams
POL 2316H Women and Politics/S. Bashevkin

Public Health Sciences
CHL 5109H Gender and Health/R. Love, Staff
CHL 5117H A Global Perspective on the Health of Women and Children/ C. G. Chalin

Religion
RLG 2021H Historiography of Religions/C. T. McIntire
RLG 2025H Critical Social Theory and Feminist Religious Thought/ M. Hewitt
RLG 2026H Modernity, Postmodernity, and the Future of Religion/M. Hewitt
RLG 2038H Body and Transcendence/ B. Pronger

Social Work

SWK 4304H Globalization and Transnationalization: Social Work Responses Locally and Globally
SWK 4403H Women and Social Policy in Canada/S. Neysmith
SWK 4420H Human Rights and Social Justice/Staff
SWK 4422H Social Housing and Homelessness/J. D. Hulchanski
SWK 4503H Advanced Social Work Research
SWK 4606H Diversity, Access, and Equity in Social Work Practice
SWK 4609H Sexuality, Sexual Diversity and Social Work Practice/Staff
SWK 4623H Violence in Families: Multilevel Intervention in Interdisciplinary PracticelR. Roberts
SWK 4624H Feminist Social Work Practice/ Staff

Sociology

SOC 6017H Sociology of Families I/Staff
SOC 6117H Sociology of Families II/Staff
SOC 6019H Gender Relations I/Staff
SOC 6119H Gender Relations II/Staff

Sociology and Equity Studies in Education

SES 1909H Eco-Sociology/M. Eichler
SES 1912H Foucault and Research in Education: Discourse, Power and the Subject/K. Dehli
SES 1921Y The Principles of Anti-Racism Education/G. J. S. Dei
SES 1922H Sociology of Race and Ethnicity/ G. J. S. Dei
SES 1923H Racism, Violence, and the Law: Issues for Researchers and Educators/S. H. Razack
SES 1926H Race, Space and Citizenship: Issues for EducatorslS. Razack
SES 1927H Global Economic Restructuring—International Migration—Immigration Policies (Canada, U.S., Germany)/R.B. Folson
SES 1954H Marginality and the Politics of Resistance/S. H. Razack
SES 1956H Social Relations of Cultural Production in Education/ R. Walcott
SES 1957H Doing Disability in Theory and Everyday Life/Staff
SES 1982H Women, Diversity, and the Educational System/S. Acker, H. Lenskyj
SES 1983H Gender, Race and Historical Sociology/Staff
SES 1985H Women's Learning, Women's Health Movements, and the Health Professions/H. Lenskyi
SES 1988H Diversity and Social Justice Issues in Physical Education, Recreation and Sport/H Lenskyj
SES 1989H Black Feminist Thought/N. Wane
SES 1992H Feminism and Poststructuralism in Education/K. Dehli
SES 2910H Changes in Families and Policy Consequences for Government and Education/M. Eichler
SES29141-1 Education, Gender Relations, and Masculinity/Staff
SES 2999H Special Topics in Sociological Research in Education/Staff
SES 3910H Advanced Seminar on Race and Anti-Racism Research Methodology in Education/G. J. S. Dei
SES 3912H Race and Knowledge Production Issues in Research/S. Razack
SES 3913H En/Coding Domination: Theorizing Power Relations Based on Race, Gender, Class and Sexuality/R. *B.* Folson
SES 3920Y The Politics of Representation and Pedagogies of 'Difference'/ Staff
SES 3931H Feminism and Postructuralism in Education/K. Dehli
SES 3932H Contemporary Perspectives on Women and Higher Education/ S. Acker
SES 3933H Theorizing Transnationality: Feminist Perspectives/D. A. Trotz
SES 3952H Sexism, Racism, Colonialism: Pedagogical Implications/D. A. Trotz
SES 3999H Special Topics in Advanced Sociological Research in Education/Staff

Spanish

SPA 2278H Contemporary Hispanic Women's Writing I/A. Percival
SPA 2279H Contemporary Hispanic Women's Writing II/A. Percival
SPA 2805H Representations of Women in Latin American Culture/ R. Sarabia

Theory and Policy Studies in Education

TPS 1406H Sexuality and the History of Education/D. Levine
TPS 1412H The History of Women and Higher Education/Staff

TPS 1418H The Role of Education in Theories of Women's Emancipation I/ Staff
TPS 1421H The History of Women and Education/D. Levine, C. Morgan
TPS 1425H Class Formation and Its Relation to the Schools/C. L. Morgan
TPS 1426H The History of Women and Education in Canada/C. Morgan
TPS 1430H Gendered Colonialisms, Imperialisms and Nationalisms in History/C. L. Morgan
TPS 1439H Gender, Ethics, and Education: Philosophical Issues/D. R. Boyd
TPS 1442H Cultural and Racial Difference in Education: Philosophical Perspectives/D. R. Boyd
TPS 1462H Women, Literature, and Education///Staff
TPS 1488H Feminist Theory, Musical Experience, and Music Education/Staff
TPS 3046H Gender Issues in Educational Leadership/N, Bascia
TPS 3417H Research Seminar in Feminist Criticism, Aesthetics, and Pedagogy/Staff

Wood Products Engineering (Collaborative Program)

Program Committee

M. T. Kortschot, BASc, MASc, PhD, PEng/Chemicall Engineering & Applied Chemistry

P. A. Cooper, BScF, MSc, BEd, PhD, Value-Added Wood and Composite Products Chair/Forestry (Director)

M. Sain, BSc, BASc, MTech, PhD, PEng/Forestry

N. Yan, BASc, PhD/Forestry

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Nature of the Collaborative Program

The graduate departments of Forestry, Chemical Engineering and Applied Chemistry, and Mechanical and Industrial Engineering participate in the Collaborative Master's Program in Wood Products Engineering. This program is directed to building an understanding of the material properties and science of wood and wood processing on the strong science and engineering backgrounds of M.Sc.F./M.A.Sc. candidates. Students in the program will take a number of core courses and will work with a participating "industry partner" company during an internship to define problems for field and laboratory research and thesis preparation. The participating departments contribute courses and provide facilities and major supervision, through participating faculty members, for graduate research.

Upon successful completion of the master's degree requirements of the home department, as well as the Wood Products Engineering Program requirements, students receive the notation "Completed Collaborative Master's Program in Wood Products Engineering" on their transcript.

Application Procedure

Candidates 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. Candidates must first apply to and be accepted into a master's degree program of one of the collaborating departments, i.e., the M.Sc.F. program in Forestry or the M.A.Sc. program in either Chemical Engineering and Applied Chemistry or Mechanical and Industrial Engineering, under the research supervision of one of the participating faculty members. (See departmental entries in this calendar for details on admission and degree requirements.) Following registration in one of the collaborating departments, candidates interested in the Collaborative Program must consult with their program supervisors (and supervisory committees), as well as with the Wood Products Engineering Program Director, to identify appropriate degree and course requirements and, in particular, the availability of a relevant internship placement. Subsequent to these discussions, and by January 15 in the term preceding the proposed summer internship start date, students must confirm their interest in the Collaborative Program by submission of a formal application. Application instructions are available from the Graduate Administrator, Faculty of Forestry.

Program Requirements

Students in the program must meet the specific degree and course requirements of their home departments, including at least three half-courses selected from the Wood Products Engineering elective course offerings listed below. In addition, participants must successfully complete the Collaborative Program's core requirement JFE1300H Wood ***Products Engineering Internship*** in which students will define an industrial problem during a three- to six-month internship with a wood products company and will prepare and successfully defend a research thesis addressing the problem. Student programs are subject to approval by the student's supervisor and supervisory committee and the home department.

See also departmental entries for M.Sc.F./M.A.Sc. degree requirements.

Courses of Instruction

The following courses, offered through the collaborating departments, support the Wood Products Engineering Collaborative Program.

Core Course

JFE 1300H Wood Products Engineering Internship (Credit/No Credit)/ Staff

Elective Courses

FOR 1280H Wood Products and Processing/ P.A. Cooper
FOR 1282H Wood Chemistry/M. Sain, N. Yan
FOR 1284H Bonding and Adhesion Technology/N. Yan
FOR 1286H Natural Fibre Production Technology/M. Sain, N. Yan
FOR 1288H Wood Composites Processing/ M. Sain
FOR 1290H Wood and Material Science/P A. Cooper, M. Sain
FOR 1292H Long Term Performance and Durability of Wood-Based Materials/P A. Cooper, M. Sain, N. Yan
JCI 1321H Wood Engineering/J. Spelt, M. Kortschot

Zoology ZOO

Graduate Faculty

Full Members

P. A. Abrams, BS, PhD
A. F. Agrawal, BSc, PhD, Canada Research Chair
T. M. Alloway, BA, MA, PhD
M. C. B. Andrade, BSc, MSc, PhD
H. L. Atwood, BA, MA, PhD, DSc, FRSC
A. J. Baker, BSc, MSc, PhD
R. L. Baker, BSc, MSc, PhD (Chair)
F. M. Barrett, BSc, MSc, PhD
R. Boonstra, BSc, PhD
D. R. Brooks, BS, MS, PhD
I. R. Brown, BSc, PhD, Canada Research Chair
T. J. Brown, BSc, PhD
A. E. Bruce, BA, PhD
L. T. Buck, BSc, PhD
D. R. Calder, AM, BSc, PhD
B. Chang, BA, PhD, Canada Research Chair
N. C. Collins, BA, PhD
D. Currie, BSc, PhD
H. Cyr, BSc, MSc, PhD
D. C. Darling, BSc, MSc, PhD
T. Day, BSc, MSc, PhD
M. D. Engstrom, BS, MS, PhD
M.-J. Fortin, BSc, MSc, PhD
J. H. Fullard, BSc, MSc, PhD
D. L. Gibo, BA, MA, PhD
D. Godt, MSc, PhD
M. R. Gross, BSc, PhD
D. T. Gwynne, BSc, PhD
R. Harrison, BSc, MSc, PhD
D. M. Irwin, BSc, PhD
D. A, Jackson, BSc, MSc, PhD (Associate Chair, Graduate Affairs)
B. A. Lange, BSc, PhD
E. W. Larsen, BSc, MSc, PhD
J. Levine, BA,PhD,Canada Research Chair
M. Locke, BA, BSc, PhD
D. A. Lovejoy, BSc, PhD
L. L. Manne, BSc, MSc,PhD
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G. K. Morris, BSA, MSc, PhD
R. W. Murphy, BA, MA, PhD
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I. Orchard, BSc, PhD, DSc
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S. M. Smith, BSc, MSc, PhD
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W. G. Sprules, BSc, MA, PhD
R. Stephenson, BSc, PhD
B. A. Stewart, BSc, MSc, PhD, Canada Research Chair
U. Tepass, MSc, PhD, ClHR Investigator
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J. D. Thomson, AB, MS, PhD
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J. T. Westwood, BSc, MSc, PhD
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J. S. Yeomans, BA, PhD
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A. P. Zimmerman, BA PhD

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D. A. Chant, BA, MA, PhD, OC, FRSC
S. S. Desser, BSc, MSc, PhD
D. W. Dunham, BS, PhD
J. 6. Falls, PhD
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The Department of Zoology offers graduate training in the following research sections:
Genetics, Cellular and Developmental Biology
Ecology and Behaviour
Evolutionary Biology
Physiology

The work of each student will ordinarily fall within one of these areas. With the approval of the Associate Chair, an individual research/ reading course (ZOO 1002H,Y) may be arranged with faculty in one of the research sections where a formal graduate course in that area is not already available. Permission is required to take this course more than once for credit in a degree program.

Admission Requirements

Applicants to the Master of Science and Doctor of Philosophy degree programs are accepted under the general regulations. Applicants to the M.Sc. program must have at least a mid-B average in each of the last two years' equivalent of study (five full courses each). An elementary but competent knowledge of physics and chemistry will be required, and a knowledge of the general field of biology must be demonstrated. It is the student's responsibility to arrange for supervision by contacting potential supervisors. Exceptional students are encouraged to enter the Ph.D. program directly from the B.Sc. Students may also transfer to the Ph.D. program from the M.Sc. program.

Program Requirements

When arranging their course and research programs with their supervisors, M.Sc. and Ph.D. candidates may consult the Department's Associate Chair for Graduate Affairs. The entire course of study must be approved by the student's advisory committee and the Department.

Students wishing to take a minor in this Department should discuss the requirements with the faculty concerned and should obtain the approval of the Associate Chair.

Degree of Master of Science

M.Sc. candidates are required to take at least one graduate full-course equivalent in Zoology or another cognate graduate unit. Included must be one designated core half-course. Completion and defence of a thesis is required.

The Department encourages graduate students to complete M.Sc. degree requirements within two years of admission.

Degree of Doctor of Philosophy

Ph.D. candidates are required to take at least two graduate full-course equivalents. Included must be one designated core half-course. Students entering the Ph.D. program directly from the BSc. or transferring from the MSc. program, are normally required to take the equivalent of at least two graduate full courses. Ph.D. candidates undergo an appraisal (qualifying examination) within 18 months of embarking on the program. Candidates transferring from an M.Sc. to a Ph.D. program must pass the appraisal before the transfer is approved. Completion and defence of a thesis is required.

The Department encourages graduate students to complete Ph.D. degree requirements within four years of admission.

Collaborative Programs

The Department of Zoology participates in the following collaborative programs:

1 Biomedical Toxicology
2 Developmental Biology
3 Environmental Studies
4 Neuroscience
5 Proteomics and Bioinformatics

A M.Sc. or Ph.D. degree program may be taken in Biomedical Toxicology, Environmental Studies, or Neuroscience through this Department. A Ph.D. degree program in Developmental Biology is available through this Department. For more details, consult the separate entries in this calendar.

Courses of Instruction

Not all courses listed are offered in a given year. Please consult course instructor(s).

Courses Offered at the Graduate Level Only

ZOO 1100H Advanced Biostatistics for Biologists/M.-J. Fortin
ZOO 1002H,Y Advanced Research and Reading Course (may be taken only once for credit)/Staff
ZOO 1005H Spatial Analysis of Ecological Landscapes/M. -J. Forth
ZOO 1006H Recent Advances in Integrative Physiology/. Lovejoy

ZOO 1014H Advanced Ecology/P. Abrams, H. Cyr, H. Rodd
JDB 1025Y Developmental Biology/Staff
JBZ 1018H Advanced Microscopy Course/ R. Harrison, C. Hasenkampf
ZOO 1040H Multivariate Analysis in Biology/ D. A. Jackson
ZOO 1500H Conceptual Problems in Ecological/Evolutionary Research/N. C. Collins
ZOO 1501H The Biology of Signal Transduction/D. H. O'Day, A. B. Lange
ZOO 1502H Molecular Entomology/P. A. Romans
ZOO 1504H Species and Speciation/ D. Brooks, D. McLennan, R. Winterbottom
ZOO 1505H Development of Evolutionary Thought/Staff
ZOO 1506H Concepts in Developmental Biology/D. Godt, E. Larsen, M. Ringuette, P. Romans, U. Tepass, S. Varmuza
ZOO 1511Y Systematic Entomology/D. C. Darling
Students wishing to take this course should consult the instructor in the spring session preceding registration; a collection of insects is required.
ZOO 1516H Seminar in Ecology/W. G. Sprules, N. C. Collins, R. L. Baker
JZB 1520H Evolutionary Ecology/L. Rowe, Botany and Zoology Staff
ZOO 2215H Insect Behaviour/G. K. Morris, T. M. Alloway
ZOO 2217H Animal Sound and Vibration/ G. K. Morris, A. C. Mason

Graduate Courses with Significant Undergraduate Content

ZOO 1013H Limnology/A. P. Zimmerman
ZOO 1018Y Ichthyology: Systematics and Distribution/R. Winterbottom
ZOO 1503H Foundations of Phylogeneticsl Staff
ZOO 1462H Phylogenetic Systematics/R. W. Murphy, D. C. Darling
JZB 1521H Molecular Evolution/A. J. Baker, D. M. Irwin

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