

GRADUATE

GEOGRAPHY

University of Toronto
Department of Geography & Planning

Handbook 2016-2017

A guide to
geography courses and programs



geography.utoronto.ca

Preface

This handbook outlines the basic degree requirements, financial support policy and other general information relevant to graduate studies in geography.

This handbook should be read in conjunction with the policies, regulations and guidelines outlined in the School of Graduate Studies Calendar available at www.sgs.utoronto.ca.

This handbook was last revised on August 31, 2016.

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University of Toronto
 Department of Geography and Program in Planning

GRADUATE STUDENT HANDBOOK 2016-2017

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1 Academic Calendar

Fall 2016

July 18	Registration for fall session begins
August 1	Civic holiday (University closed)
August 2	Course enrolment begins
August 30	Last date for payment of tuition fees to meet registration deadline
September 5	Labour Day (University closed)
September 6-9	Orientation Week Activities
September 12	Most formal graduate courses and seminars begin
September 14	Summer session grades available for viewing online
September 15	Final date to submit PhD theses to SGS to avoid fees for 2016-2017
September 16	Registration for Fall session ends; after this date a late registration fee will be assessed
September 26	Final date to add full-year and Fall session courses
September 30	Final date for receipt of degree recommendations and submission of any required theses for master's for Fall Convocation without fees being charged for the fall session
September 30	Final date to submit final PhD theses for Fall Convocation
October 10	Thanksgiving Day (University closed)
October 31	Final date to drop fall session half or full courses without academic penalty
November	Fall Convocation – Information is posted at www.convocation.utoronto.ca
December 21	University closed for winter break until December 30 inclusive

Winter 2017

January 2	University reopens
January 9	Most formal graduate courses and seminars begin
January 13	Final date for registration for students beginning program in Winter session
January 16	Final date to submit PhD theses without fee payment for Winter session
January 18	Fall session grades available for viewing online
January 20	Final date for receipt of degree recommendations and submission of any required theses for master's degrees for March (in absentia) or June Convocation without being charged fees for the Winter session
January 20	Final date to submit final doctoral thesis for March in absentia convocation
January 23	Final date to add winter session courses
February 20	Family Day (University closed)
February 27	Final date to drop full-year and winter courses without academic penalty

March	March graduation in absentia – Information is posted at www.convocation.utoronto.ca
April 14	Good Friday (University closed)
April 21	Students recommended for convocation in June - Coursework must be completed and grades must be submitted for full-year and Winter session courses
April 21	Final date for receipt of degree recommendations and submission of any required theses for master's degrees for June Convocation
April 21	Final date for submission of final PhD theses for June Convocation

Summer 2016

May 5	Final date for registration for students beginning program in Summer session
May 8	Final date to enrol in May-June or May-August session courses
May 17	Full-year and Winter session grades available for viewing online
May 22	Victoria Day (University closed)
May 26	Final date to drop May/June courses without academic penalty
June	Spring Convocation - Information is posted at www.convocation.utoronto.ca
June 19	Final date to drop May-August courses without academic penalty
July 3	Canada Day (University closed)
July 3	Final date to enrol in July-August courses
July 17	Final date to drop July-August courses without academic penalty
July 19	May-June session grades available for viewing online

2 Faculty Directory

2.1 Full Time Faculty

Christian Abizaid Assistant Professor	(416) 978-3373 christian.abizaid@utoronto.ca SS5055 (STG)	Human-environment interactions; peasant livelihoods in tropical forests; cultural/political ecology
Ahmed Allahwala Associate Professor, Teaching Stream	(416) 287-7313 aallahwala@utsc.utoronto.ca MW274 (UTSC)	Urban and social policy and planning; participatory action research; community-engaged learning in geography
George Arhonditsis Associate Professor	(416) 208-4858 georgea@utsc.utoronto.ca SW410A (UTSC)	Aquatic biogeochemical modelling; aquatic ecosystem responses to climatic variability; plankton ecology/food web dynamics
Laurel Besco Assistant Professor	(905) 828-3929 laurel.besco@utoronto.ca DV3266 (UTM)	Environmental/sustainability law and policy; green economy; socio-legal dimensions of climate change
Alana Boland Associate Professor	(416) 978-1587 boland@geog.utoronto.ca SS5006 (STG)	Environment and development; sustainability and urban political economy; China (1950s to present)
Donald Boyes Associate Professor, Teaching Stream	(416) 978-1585 don.boyes@utoronto.ca SS5011 (STG)	Geographic information systems (GIS) and science; scholarship of teaching and learning; pedagogical development; teaching with technology; online and blended learning
Laura Brown Assistant Professor	(905) 569-4239 lc.brown@utoronto.ca DV3279 (UTM)	Cryosphere; climate – lake interactions; remote sensing and numerical modelling
Michelle Buckley Assistant Professor	(416) 208-5122 mbuckley@utsc.utoronto.ca MW289 (UTSC)	Migration and urbanization; intersectional perspectives on work and employment; Marxist philosophy and postcolonial urban frameworks
Ron Buliung Associate Professor	(905) 569-4419 ron.buliung@utoronto.ca SB3104 (UTM)	Transportation geography; interaction and feedback between transport, land use and environmental systems; activity-travel analysis and modelling
Susannah Bunce Assistant Professor	416-287-7296 scbunce@utsc.utoronto.ca Bladen Wing 526C (UTSC)	Urban sustainability and communities, urban political ecology, community- based planning and development in cities
Jing Chen Professor	(416) 978-7085 chenj@geog.utoronto.ca SS5058 (STG)	Remote sensing; geographical information systems; biogeochemical cycle modelling

Tenley Conway Associate Professor	(905) 828-3928 tenley.conway@utoronto.ca SB3256 (UTM)	Urban vegetation; human drivers of urban ecosystems; land use/land cover modelling
Deborah Cowen Associate Professor	(416) 946-0567 deb.cowen@utoronto.ca SS5033 (STG)	Contested spaces; geographies of citizenship and labour; militarism, violence and security
Amrita Daniere Professor	(905) 569-4768 amrita.daniere@utoronto.ca	Infrastructure provision in developing country megacities (including water and sanitation services, housing, solid waste collection and disposal and transportation); development and implementation of policy and planning from a political-economy perspective in third world urban areas
Joseph Desloges Professor	(416) 978-3709 joseph.desloge@utoronto.ca Earth Sciences Centre, 22 Russell St. (STG)	Holocene fluvial and glacial landscape reconstruction using sedimentary archives; reconstruction of extreme events; urbanization impacts on stream erosion
Pierre Desrochers Associate Professor	(905) 828-5206 pierre.desrochers@utoronto.ca Davis 3273 (UTM)	Economic development; technological innovation; entrepreneurship
Richard DiFrancesco Associate Professor	(416) 978-2935 difrance@geog.utoronto.ca SS5025A (STG)	Regional economic dynamics; global production networks (GPNs); the nature of the GGH's articulation into various GPNs, and the regional implications of changes therein
Tim Duval Assistant Professor	905) 569-4558 tim.duval@utoronto.ca DV3265 (UTM)	Applied ecohydrology; wetland hydrology and biogeochemistry; catchment hydrology and biogeochemistry
Michael Ekers Assistant Professor	(416) 208-4764 mekers@utsc.utoronto.ca MW336 (UTSC)	Social and political theory; political economic approaches to the production of environmental landscapes; the 'identities' of people that produce environmental spaces and their social positioning in the production process
Steven Farber Assistant Professor	(416) 208-5120 steven.farber@utoronto.ca (UTSC)	Transport geography; spatial analysis; accessibility; public transportation
Matt Farish Associate Professor	(416) 978-6671 farish@geog.utoronto.ca SS5040 (STG)	Militarism and geopolitics; the Cold War; environmental history
Alexandra Flynn Assistant Professor	(416) 208-4871 alexandra.flynn@utoronto.ca POL106-8 (UTSC)	Urban governance; legal geographies

Meric Gertler Professor	(416) 978-2121 president@utoronto.ca 206-27 King's College Cir. (STG)	Cities as sites of innovation and creativity; role of universities and research organizations in urban economies; regional and national systems of innovation
Emily Gilbert Associate Professor	(416) 978-0751 emily.gilbert@utoronto.ca UC B301 (STG)	Citizenship, borders and security; nationalism, postcolonialism, globalization; the culture and politics of money
Kanishka Goonewardena Associate Professor	(416) 978-2974 kanishka.goonewardena@utoronto.ca SS5062 (STG)	Critical theory and Marxist philosophy; architecture and urban planning; colonialism, imperialism, nationalism
William Gough Associate Professor	(416) 287-7245 gough@utsc.utoronto.ca (UTSC)	Mixing in ocean general circulation models; efficient design of computer experiments; passive tracer uptake during climate change scenarios
Jason Hackworth Professor	(416) 946-8764 jason.hackworth@utoronto.ca SS5010 (STG)	Urban political economy; comparative urban policy; land abandonment
Ju Hui Judy Han Assistant Professor	(416) 208-2968 judy.han@utoronto.ca MW202 (UTSC)	Religion and secularisms; travel and mobilities; gender and sexuality
Danny Harvey Professor	(416) 978-1588 harvey@geog.utoronto.ca SS5032 (STG)	Energy efficiency potential and costs; renewable energy and costs; global energy system decarbonisation scenarios
Yuhong He Associate Professor	(905) 569-4679 yuhong.he@utoronto.ca DV3271 (UTM)	Remote sensing; advanced spatial analysis; invasive and endangered species detection and mapping
Paul Hess Associate Professor	(416) 978-4955 hess@geog.utoronto.ca SS5067 (STG)	Pedestrian environments and design; planning for active transport modes; streets as public space
Mark Hunter Associate Professor	(416) 208-4764 mhunter@utsc.utoronto.ca B527 (UTSC)	AIDS; sexuality; critical development studies
Marney Isaac Assistant Professor	(416) 287-7276 Marney.Isaac@utoronto.ca EV462 (UTSC)	Agroecology; plant-soil interactions; biogeochemical cycling
Ryan Isakson Assistant Professor	(416) 287-7345 risakson@utsc.utoronto.ca MW334 (UTSC)	Political economy of food and agrarian development; financialization of food and agriculture; agriculture biodiversity; peasant livelihoods
Thembela Kepe Associate Professor	(416) 287-7281 kepe@utsc.utoronto.ca (UTSC)	People-environment interactions; land rights; politics of development

Nicole Klenk Assistant Professor	(416) 208-5089 nicole.klenk@utoronto.ca SW638 (UTSC)	Social studies of science; environmental policy; climate change adaptation
Anna Kramer Assistant Professor, CLTA	(416) 978-3236 anna.kramer@utoronto.ca SS5063 (STG)	Social justice and access to the city; transit networks and land use; spatial and economic perspective
Nicole Laliberte Assistant Professor, Teaching Stream	(905) 569-4854 nicole.laliberte@utoronto.ca DV3262 (UTM)	Feminist geopolitics; anti-oppression pedagogies; geographies of emotion
Igor Lehnherr Assistant Professor	(905) 569-5769 igor.lehnherr@utoronto.ca DV3281 (UTM)	Biogeochemistry of major and trace elements; contaminants; impacts of climate change on aquatic ecosystems
Deborah Leslie Professor	(416) 978-8467 leslie@geog.utoronto.ca SS5066 (STG)	Cultural industries; commodity chains; material culture
Robert Lewis Professor	(416) 978-1590 lewis@geog.utoronto.ca SS5003 (STG)	Historical geography of North American economic restructuring; industrial and social geography of suburban Chicago, 1850-1950; wartime manufacturing and metropolitan growth
Joseph Leydon Senior Lecturer	(905) 569-4854 joseph.leydon@utoronto.ca SE2113C (UTM)	Regional geography of North America; colonial North America and the Caribbean; population dynamics
Jane Liu Assistant Professor	(905) 828-5298 liu@geog.utoronto.ca (STG)	Atmospheric environment (pollution transport and emission from fires, air quality and health implications, satellite monitoring, modelling); tropospheric and stratospheric ozone; climate change
Ken MacDonald Associate Professor	(416) 287-7294 kmacd@utsc.utoronto.ca B584 (UTSC)	Nature, society and environmental change
Virginia Maclaren Associate Professor	(416) 978-4977 maclaren@geog.utoronto.ca SS5050 (STG)	Waste management; sustainability indicators; environmental assessment
Minelle Mahtani Associate Professor	(416) 287-7302 mahtani@utsc.utoronto.ca (UTSC)	"Mixed race" identity; media and minority representation; critical journalism
Deborah McGregor Associate Professor	(416) 978-6591 mcmgregor@geog.utoronto.ca SS5037 (STG)	Aboriginal environment and resource management; traditional ecological knowledge; research methods
John Miron Professor	(416) 287-7287 miron@chass.utoronto.ca (UTSC)	Location theory; migration and regional economic growth; demographic change and housing demand

Carl Mitchell Associate Professor	(416) 208-2744 cmitchell@utsc.utoronto.ca SY362 (UTSC)	Hydrology; biogeochemistry; mercury and methylmercury
Sharlene Mollett Assistant Professor	(416) 208-2237 sharlene.mollett@utoronto.ca MW371 (UTSC)	Land and natural resource conflicts, political ecology, international development and racialization
Barbara Murck Senior Lecturer	(905) 828-5426 bmurck@utm.utoronto.ca SB3110 (UTM)	Natural hazards, environment and development; developing world
Rajyashree Narayanareddy Assistant Professor	(416) 287-7297 rreddy@utsc.utoronto.ca B508 (UTSC)	Geographies of waste and labour, urban political ecology, global urbanism
Andrea Olive Assistant Professor	(905) 569-4556 Andrea.olive@utoronto.ca DV3264 (UTM)	Environmental policy, conservation, private property
Trevor Porter Assistant Professor	(905) 828-5314 trevor.porter@utoronto.ca Davis 3280 (UTM)	Paleoenvironments; climate change; stable isotope geochemistry
Scott Prudham Professor	416-978-1592 scott.prudham@utoronto.ca SS5007 (STG)	Political economy; political economy and environment; industrial and alternative forestry
Katharine Rankin Associate Professor	(416) 978-1592 rankin@geog.utoronto.ca SS5002 (STG)	Politics of planning and development; feminist and critical theory; culture-economy articulations
Susan Ruddick Professor	(416) 978-1589 ruddick@geog.utoronto.ca SS5059 (STG)	Critical theory, philosophy (both continental and non-Western); UrbanNatures, Socionatures; anti-racism; anti-colonialism
Matti Siemiatycki Associate Professor	(416) 946-5145 siemiatycki@geog.utoronto.ca SS5041 (STG)	Transportation policy and planning; infrastructure finance and delivery; community and regional planning
Rachel Silvey Associate Professor	(416) 978-6640 silvey@geog.utoronto.ca SS5036 (STG)	Migration; Indonesia; feminist theory
Neera Singh Assistant Professor	(416) 971-2658 neera.singh@gmail.com SS5023 (STG)	Environmental conservation and development, community forestry, forest tenure and forest governance, environmental behaviour and subjectivity
Tat Smith Professor	(416) 978-4638 tat.smith@utoronto.ca ES3038 (STG)	Forest ecology and soils; carbon cycling in forest ecosystems; bioenergy from sustainable forestry
Andre Sorensen Associate Professor	416) 287-5607 sorensen@utsc.utoronto.ca B350 (UTSC)	Urban geography; urban form; planning history and theory

Sarah Wakefield Associate Professor	(416) 978-3653 sarah.wakefield@utoronto.ca UC373 (STG)	Mobilizing for community food security in Canada; community development and neighbourhood change; environmental justice/sustainability
Alan Walks Associate Professor	(905) 828-3932 alan.walks@utoronto.ca SB2113E (UTM)	Urban economic restructuring and social polarization; urban policy and neighbourhood inequality; neighbourhood effects and political ideology
Michael Widener Assistant Professor	(416) 946-0270 michael.widener@utoronto.ca SS5037 (STG)	Access to healthy food and healthcare facilities; health and transportation geographies; GIS, agent-based modelling and spatial optimization
Kathleen Wilson Professor	(905) 828-3864 kathi.wilson@utoronto.ca SB3111 (UTM)	Aboriginal health; neighbourhoods and health; immigration
Jun Zhang Assistant Professor	(416) 978-2958 zhang@geog.utoronto.ca 5025B (STG)	Urban and regional economic development; geographic theorizing of markets, states, and institutions; geography of innovation and entrepreneurship

2.2 Cross-Appointed Faculty

Harald Bathelt Professor	(416) 946-0183 harald.bathelt@utoronto.ca SS3132 (STG)	Economic geography; relational economic geography; clusters, innovation systems and knowledge creation
Shauna Brail Senior Lecturer	(416) 978-7463 shauna.brail@utoronto.ca 3 rd Floor, 2 Sussex Ave.	Independent fashion design firms in Toronto; community leadership and engagement in mixed income community revitalization initiatives; urban inequality and the intraurban geography of suicides in Toronto
Shiri M. Breznitz Assistant Professor	Munk School of Global Affairs (STG)	Economic development policies; location theory; university technology transfer on regional, national and international levels

Sharon Cowling Associate Professor	(416) 978-5612 cowling@es.utoronto.ca ES4013 (STG)	Earth system science; interface between the biosphere and atmosphere; changes in regional and global climate
Miriam Diamond Professor	(416) 978-1586 miriam.diamond@utoronto.ca (STG)	Environmental chemistry; mathematical modelling; analytical chemistry
Sarah Finkelstein Associate Professor	(416) 978-5613 finkelstein@es.utoronto.ca ES3129 / ES4088 (STG)	Paleoecology; paleoclimatology; paleolimnology
Richard Florida Professor	florida@rotman.utoronto.ca	Economic development; creativity; location
Dina Georgis Associate Professor	(416) 978-4671 dina.georgis@utoronto.ca WI2027 (STG)	Aesthetics; archive studies; diaspora studies
Adam Martin Assistant Professor	(416) 287-7326 adam.martin@utoronto.ca SW565 (UTSC)	Forest ecology; agroecology; global change biology
Blake Poland Associate Professor	(416) 978-7542 blake.poland@utoronto.ca HS588 (STG)	Healthy cities and communities; community development as an arena of practice for health professionals; qualitative methods, critical social theory
David Roberts Assistant Professor, Teaching Stream	(416) 978-7790 d.roberts@utoronto.ca Innis College, 3 rd floor (STG)	Mega-events and urbanization; public-private partnerships and public infrastructure; participatory planning
John Robinson Professor	(416) 946-8936 johnb.robinson@utoronto.ca MK202 (STG)	Intersection of climate change mitigation; adaptation and sustainability; use of visualization, modeling and citizen engagement to explore sustainable futures
Beth Savan Retired Senior Lecturer	(416) 978-1586 b.savan@utoronto.ca ES1084A (STG)	Sustainability planning; energy conservation; changing behaviour to conserve resources
Matthew Wells Associate Professor	(416) 208-4879 wells@utsc.utoronto.ca (UTSC)	Environmental fluid dynamics; turbulence modelling; mixing and dispersion of nutrients and larvae

3 Introduction

3.1 About the Department

The University of Toronto's Department of Geography is one of the oldest and largest geography departments in North America. Founded in 1935, the department is now present on three University of Toronto campuses, and maintains a roster of approximately 200 graduate students. It has a faculty of more than fifty professors with a diverse range of research interests, and each faculty member is associated with several research areas. This concentration of scholarship within the Department of Geography and Program in Planning allows for the maintenance of a very energetic and creative environment.

Our Graduate Programs include Masters and Doctoral level studies in several cognate areas within Geography including: Biogeography, Cultural and Historical Geography, Economic Geography, Environment and Resource Management, Geographic Information Systems, Physical Geography, Social Geography, and Urban Geography. In addition, our graduate students have the opportunity to customize their studies through a number of collaborative programs established with other units at the University of Toronto.

The three-campus graduate program offers MA, MSc, and PhD degrees in Geography and MScPI and PhD degrees in Planning. Planning programs are described in a separate handbook for the Program in Planning.

3.2 Multidisciplinary Research Clusters within Geography

In an effort to continually monitor its direction and its social relevance, the Department has identified a series of research clusters that serve to link seemingly disparate elements of the Department in multidisciplinary areas. These research clusters include:

- Cities and everyday life;
- Nature, society and environmental change;
- Political spaces;
- Climate processes and climate and carbon cycle monitoring; and
- Earth-surface process and hydrology.

Each of these clusters has self-professed membership from a wide array of sub-fields within the Department. For further information, please consult the website at <http://geography.utoronto.ca/research/research-clusters/>.

3.3 Fields of Specialization within Geography

The Department's fields of specialization, and major sub-fields within geography, are listed below. The Department has regional interests in Latin America, East and South Asia, Europe, the USA and Canada.

Physical Geography and Natural Systems

Climate Modelling; Fluvial Geomorphology; Process Hydrology; Impacts of Climatic Change; Digital Terrain Analysis; Soil and Water Chemistry; Environmental Chemistry; Biogeochemical Modelling; Limnology.

Environmental Geography and Resource Management

Environmental Assessment; Natural Resource Policy; Urban Environmental Management; Water Waste Management and Recycling; Global Environmental Issues; Land Use In and Around Urban Areas; Energy Management; Sustainable Development.

Urban/Economic Geography

Industrial Location; Capital Theory and Technical Change in Regional Development; Regional Dynamics; Labour Markets; Canadian Industrial Development; Impacts of Technological Change; Population Analysis; Urban Growth and Change; Urban Systems; Housing and Housing Policy; Neighbourhood Change; Transportation Geography; Urban Landscapes; Canadian Urban Development; Transportation; Urban Environments; Inner Cities; Third World Cities.

Historical/Social/Cultural Geography

Historical Geography of Canada and the United States; Historical Urban Geography of Toronto and other North American cities; Historical Geography of Financial and Industrial Districts; Urban Social Geography; Social Policy and Political Theory; Housing; Feminist Geography; Homelessness; Community Development.

Spatial Information Systems

Remote Sensing; Geographic Information Systems; Simulation Modelling.

3.4 Departmental Resources

3.4.1 Computer and Urban Design Labs

On the St. George Campus, the following facilities are available exclusively for Geography and Planning courses and student research. A list of software installed in each lab is available on the department's website.

GIS Teaching and Computer Lab – Room 620, Sidney Smith Hall (100 St. George St.)
Equipped with 32 workstations, this lab is used for computing intensive courses, especially GIS.

Graduate Student Computer Lab – Room 617, Sidney Smith Hall (100 St. George St.)
Equipped with 8 workstations, this lab is used for graduate student use at any time (except during time slots used for scheduled courses).

Printing in student labs is administered through the Graduate Geography and Planning Student Society (GGAPSS). Students will receive a free printing credit at the start of the year and additional credit can be added during the year by contacting a GGAPSS representative.

3.4.2 Meeting Rooms

Students can book small rooms for progress committee or project meetings online at <https://mrbs.geog.utoronto.ca/> or by contacting the main office, mainoffice@geog.utoronto.ca

3.4.3 Departmental Listservs

The department maintains several email listservs which are the primary method of communicating with students and faculty. All students will have their U of T email address subscribed to all lists at the start of each academic year.

Mandatory Listserv Subscription for Students

These lists are moderated (messages must be approved) and are used by the department for official announcements.

gradadmin@geog.utoronto.ca	Official departmental announcements for all graduate students (policy, awards, registration, etc.). This list is moderated and only the graduate office can send messages.
everyone@geog.utoronto.ca	Departmental announcements which are relevant to all members of the department (faculty, students and staff). This list is moderated by the chair (messages will be reviewed for approval).
grads@geog.utoronto.ca	Information from GGAPSS and unofficial departmental announcements from students and faculty.
PLAmasters@geog.utoronto.ca	Departmental announcements for MSc Planning and MUDS students only
GGRmasters@geog.utoronto.ca	Departmental announcements for MA and MSc Geography students only
PLAphd@geog.utoronto.ca	Departmental announcements for PhD Planning students only
GGRphd@geog.utoronto.ca	Departmental announcements for PhD Geography students only

Optional Listserv Subscription for Students

These lists are for unofficial announcements and can be used by any member of the department. Students can unsubscribe by visiting <https://listserv.utoronto.ca> and clicking on the “Subscriber’s Corner” link (request a new password and register with your U of T email address).

social@geog.utoronto.ca	Announcements about social events/gatherings
employment@geog.utoronto.ca	Announcements about job postings (internal and external), internship or volunteer opportunities
political-spaces@geog.utoronto.ca	Political discussion items
classifieds@geog.utoronto.ca	Info about rooms/apartments for rent, items for sale or give-away

3.4.4 Weekly Digest

At the start of each week, the department sends out a Weekly Digest email to all members of the department which includes announcements, newsworthy items and links to events of interest. Items for inclusion in the Weekly Digest can be sent to the main office by email at mainoffice@geog.utoronto.ca

3.5 Graduate Geography and Planning Student Society

The Graduate Geography and Planning Student Society (GGAPSS) is the course union for graduate students in the department. The GGAPSS website at <http://ggapss.wordpress.com/> provides information on activities and services for current and prospective students.

3.6 Information for New Students

The School of Graduate Studies (SGS) has important information for new students on their website at: <http://www.sgs.utoronto.ca/currentstudents/Pages/Information-for-New-Students.aspx>. This website has links to several resources, including:

- First Steps for New Students
- The Essential Grad Guide
- Orientation
- Registration and enrolment information
- How to obtain a T-card, UTORid, UTmail+
- SGS Calendar
- Housing
- Resources for International Students
- Graduate Professional Skills (GPS) Program

4 Programs and Degree Requirements

4.1 Admission Requirements

Students are admitted under the general regulations of the School of Graduate Studies. For entry to the Master's programs, a standing equivalent to a University of Toronto B+ in the final two years of an acceptable bachelor's program in geography or a closely related field is required. Students with other backgrounds may be admitted upon the completion of an appropriate make-up program of geography courses.

For entry to the PhD program, a standing equivalent to a University of Toronto A- in an acceptable Master's program in geography or a closely related field is required.

Applicants whose first language is not English and who have graduated from a university where the language of instruction and examination was not English must have attained a minimum score on an acceptable English language proficiency test.

4.2 Master's Degree Programs

MA programs are those taken in all fields of human geography. MSc programs are those taken in physical geography, spatial information systems and some areas of environmental studies.

All MA students must complete the Human Geography Core Course (GGR1105H) and all MSc students must complete the Physical Geography Core Course (GGR1200H). Students have the option of completing a master's thesis or a major research paper.

Master's degree programs usually take one to two calendar years to complete. The maximum time limit is three years.

4.2.1 Thesis Option

Students enrolled in a Master's Thesis Option are required to complete the requirements below.

Coursework: Completion of 3 half-credit courses (or 1.5 FCEs), including:

- the core course (GGR1105H for MA and GGR1200H for MSc)
- one half-credit course in geography or from an approved list
- one half-credit course in any subject
- students enrolled in a collaborative program should consult [section 5](#) for any additional requirements

Research Proposal: Submission of a research proposal to their supervisor by March 1 of their first year. The proposal should be 2500 to 4000 words and include the following:

- Outline of the topic/research question
- Literature review
- Methodology
- Timeline for completion of research/data collection, writing and final defense of the thesis or major research paper

Annual Report: Students who register in a second year and beyond are required to meet with their supervisor by the end of September to review their activities over the summer and set out a timeline for the year. A report form must be completed at this meeting and submitted to the graduate office.

Thesis: Students are required to complete a thesis (RST9999Y) which must be presented and defended at a departmental oral examination before a committee of at least two graduate faculty members (one of which must be from geography) in addition to the supervisor(s). . Theses typically are approximately 100 pages and represent the result of independent research under the direction of a faculty supervisor. For MSc students, the thesis must be science-based. Once any final revisions or modifications have been made and confirmed in writing by the supervisor(s), the final thesis must be submitted to the School of Graduate Studies and to the department. Information on formatting, electronic submission and copyright is available at

<http://www.sgs.utoronto.ca/currentstudents/Pages/Producing-Your-Thesis.aspx>

4.2.2 Major Research Paper Option

Students enrolled in a Master's Major Research Paper Option are required to complete the requirements below.

Coursework: Completion of 6 half-credit courses (or 3.0 FCEs), including:

- the core course (GGR1105H for MA and GGR1200H for MSc)
- three half-credit courses in geography or from an approved list
- one half-credit course which must be taken outside the department
- one half-credit course in any subject
- students enrolled in a collaborative program should consult [section 5](#) for any additional requirements

Research Proposal: Submission of a research proposal to their supervisor by May 15 of their first year. The proposal should be 2500 to 4000 words and include the following:

- Outline of the topic/research question
- Literature review
- Methodology
- Timeline for completion of research/data collection, writing and final defense of the thesis or major research paper

Annual Report: Students who register in a second year and beyond are required to meet with their supervisor by the end of September to review their activities over the summer and set out a timeline for the year. A report form must be completed at this meeting and submitted to the graduate office.

Major Research Paper: Students are required to complete a major research paper (GGR1100Y), typically about 40-50 pages, which must be presented and defended at a departmental oral examination before a committee of at least two graduate faculty members (at least one of which must be from geography) in addition to the supervisor(s). For MSc students, the research paper must be science-based. Once any final revisions or modifications have been made and confirmed in writing by the supervisor(s), an electronic copy of the final research paper must be submitted to the department. Information on formatting, electronic submission and copyright is available at

<http://www.sgs.utoronto.ca/currentstudents/Pages/Producing-Your-Thesis.aspx>

4.3 PhD Program

The PhD program is taken in the following broad fields: physical geography and natural systems, environmental geography and resource management, urban/economic geography, historical/social/cultural geography and spatial information systems. Students may also be required to acquire knowledge of a foreign language necessary to complete their research.

PhD students work closely with a faculty supervisor, who is selected by the student in consultation with the Associate Chair, Graduate at the time of admission. The student and the faculty supervisor then select a committee of faculty members (the Supervisory Committee, see Section 4.3.3) with related research interests. Their function is to act as the core committee, which evaluates the research statement, the doctoral exam, the research proposal and the dissertation. The Associate Chair, Graduate must approve the committee's composition before the committee holds its first meeting. Subsequent changes in committee membership must be similarly approved.

Completion of the PhD program requires students to complete all requirements described in this section.

4.3.1 Timeline to Completion

The expectation is that PhD degrees will be completed within four years of initial registration. The School of Graduate Studies requires that the thesis be submitted within six years of initial registration in the program.

Year 1 (September-April)	Coursework
Year 1 (January-June)	Form supervisory committee Identify areas of concentration and prepare a draft reading list for comprehensive exam
Year 1 (May-June)	Annual progress meeting Present draft reading list for comprehensive exam to supervisory committee
Year 1, 2 (June-December)	Comprehensive Exam
Year 2 (June-no later than September Year 3)	Research Proposal Exam
Year 2 - 3	Research, data collection, writing Annual progress meeting (May)
Year 4	Research, data collection, writing Annual progress meeting (May) Internal and SGS Defense Exams

4.3.2 Residence and Length of Program

The PhD program is a four-year program that can be completed on a full-time basis. Students must complete two years in residence at the University of Toronto. All PhD program requirements must be completed within six-years from first enrolment.

4.3.3 Coursework

All students in the PhD program must take a minimum of four half-credit courses (i.e., 2.0 FCEs) and, depending on their field of specialization, up to and an additional two half-credit courses (i.e., 1.0 FCEs). A minimum of four half-credit courses must be completed by the end of the first year. PhD students who enter the program from a bachelor's degree must complete an additional three half-credit courses (i.e., 1.5 FCEs) in addition to the normal minimum doctoral course work requirements. **Students who have enrolled in collaborative programs must consult the Collaborative Programs section of this handbook (section 5) as their coursework requirements may vary from the requirements listed below.**

Physical Geography and Natural Systems: Four half credit courses (i.e., 2.0 FCE), one half-credit of which must be the core course (GGR1200H). At least one half-credit course must be taken in geography or from an approved listing of courses available from the department. At least one half-credit course must be and as many as two half-credit courses may be taken in other departments. Students who have completed the core course (GGR1200H) at the master's level may take an alternative geography course, approved by the supervisor and Associate Chair, Graduate.

Environmental Geography and Resource Management: Six half-credit courses (i.e., 3.0 FCE), one half-credit of which must be the core course (GGR1110H). At least one half-credit course must be and as many as three half-credit courses may be taken in other departments.

Urban/Economic Geography: Six half-credit courses (i.e., 3.0 FCE), one half-credit of which must be the core course (GGR1110H). At least one half-credit course must be and as many as three half-credit courses may be taken in other departments.

Historical/Social/Cultural Geography: Six half-credit courses (i.e., 3.0 FCE), one half-credit of which must be the core course (GGR1110H). At least one half-credit course must be and as many as three half-credit courses may be taken in other departments.

Spatial Information Systems: Four half credit courses (i.e., 2.0 FCE), one half-credit of which must be the core course (GGR1200H). At least one half-credit course must be taken in geography or from an approved listing of courses available from the department. At least one half-credit course must be and as many as two half-credit courses may be taken in other departments. Students who have completed the core course (GGR1200H) at the master's level may take an alternative geography course, approved by the supervisor and Associate Chair, Graduate.

4.3.4 Supervisory Committee

During the second term of the first year, the student and supervisor will assemble a Supervisory Committee.

The Supervisory Committee consists of the supervisor/co-supervisors, at least one additional graduate faculty member from the department and an additional graduate faculty member from any graduate unit. Additional members can be added if necessary. The Supervisory Committee meets with the student to review progress at least once a year, administers program exams, and regularly provides advice on future work.

4.3.5 Annual Progress Reports

Progress review meetings must be held at least once per academic year, typically between April to June of each year (or more often at the discretion of the Associate Chair, Graduate). The Supervisory Committee will assess progress and plans for the following year and prepares an annual progress report which must be submitted to the graduate office for review by the Associate Chair, Graduate. The report is recorded in the student's ROSI record. It is the responsibility of the student to schedule progress report meetings.

For the first progress meeting (held during the student's first year), the student should fill out the annual progress report form and bring a draft comprehensive reading list for discussion to the meeting. The timeline for writing the comprehensive exam should be established at this meeting. The student should also include 2-3 paragraphs on the proposed thesis area or topic. Annual reports for each year should include a list of activities undertaken in the past year, such as publications, courses, conference presentations, teacher training activities, professional development activities and progress on the dissertation (data collection, number of interviews completed and transcribed, document analysis undertaken, chapters completed, etc.). Progress reports can also be accompanied by materials such as draft questionnaires and interview guides, initial tabulations and analysis of results, and chapter summaries. The student should also construct a timeline for work to be completed and activities to be undertaken in the following year.

If a Supervisory Committee reports that a student's progress is unsatisfactory in each of two consecutive meetings, various sanctions may be recommended, including ineligibility for fellowships or termination of registration. A student who, through their own neglect, fails to have a meeting in a given year will be considered to have received an unsatisfactory progress report from the committee.

4.3.6 PhD Comprehensive Examination

Students will take a written and oral PhD Comprehensive Examination administered by the supervisory committee between June of year one and no later than December of year two. The examination requirements are slightly different for human geographers than they are for physical geographers reflecting the different needs of the discipline. The purpose of the exam is to ascertain whether a student has obtained an adequate knowledge base to continue in the PhD program; to ascertain any knowledge gaps and suggest remedial action; and to provide a student with the opportunity to get a broad perspective on their chosen field of study. The scope and three (human geography) or four (physical geography) areas of concentration of the examination are to be jointly determined by the supervisory committee and the student. They are to be laid out in the draft comprehensive reading list and are to be confirmed in the first progress meeting. It is the responsibility of the supervisory committee to review and approve the draft reading list by a deadline established jointly by the supervisor and student. The scope of the exam cannot be changed after this stage.

The student should seek the advice of all committee members in preparing for the comprehensive examination. In consultation with the supervisor, the student should compile an appropriate draft reading list for each area of concentration by June of year one. The draft reading list should be circulated to all committee members for their comments and should form the basis of the examination. Normally, the total number of readings is approximately 100, but may be shorter or longer depending on the number of books included in the list. Students may wish to consider sub-dividing each area of concentration into 2-4 themes and should include a summary of what they see as the major issues covered in each area.

The supervisor is responsible for preparing the examination paper on the basis of input received from the committee members. The detailed instructions should be finalized in consultation with the student and committee members.

4.3.6.1 Exam Format

For human geographers, the exam will cover three areas of concentration and will have three questions in each area. For physical geographers, the exam will have four areas of concentration with two questions in each area. In both cases, the student must answer one question from each area of concentration. The questions will be based on the reading list and may not extend into material not covered by the reading list. The PhD examination is comprised of a written section and an oral section. The student may choose one of the three following formats for the written section:

- **One-Day Examination:** The student writes the exam over eight hours in a closed room on campus. The examination is open book and internet access is not permitted. Citations should be included from the comprehensive exam reading list, where relevant. These can be cited in text, i.e. (Harvey, 2008). The expected length of each of the three answers for human geographers is 2000-2500 words and the expected length of each of the four answers for physical geographers is 1500-2000 words.
- **Two-Day Examination:** The student writes the examination over two periods, amounting to eight hours in total, at least one day apart. All other conditions for the exam are the same as the one-day examination.
- **Five-Day Examination:** The student writes the exam over a five day period (including weekend days if the exam period includes a weekend) either on or off-campus. The examination is due at the same time of day it is collected by the student (e.g. an exam that starts at 9am on a Thursday will be due at 9am on the following Tuesday). It is expected that students will cite their work, citations will be drawn exclusively or primarily from the reading list. There is no need to attach a list of references for books or articles included in the examination reading list. The few, if any, additional references to works cited that are not on the reading list can be attached to the end of each answer. Responses will be more in-depth than the one day exam. The expected length of each response is 3500-4500 words for human geographers and 2500-3500 words for physical geographers (not including the list of references/bibliography).

The written examination should be submitted electronically by the student to all committee members and the graduate office by the due date and time. The student should ask the committee members whether they would also like to receive a paper copy and, if so, the student is responsible for making a copy and providing it to the faculty member as soon as possible.

The oral examination (with the full examination committee) should take place not later than one week following the submission of the written exam. It is the responsibility of the student to arrange for a date, time and room for the oral examination and to provide this information to the graduate office. The graduate office will prepare an examination file which must be returned immediately following the exam.

4.3.6.2 Exam Results

At the time of the oral examination, the committee should base its evaluation of the student on the following criteria:

- The quality of the written responses: mastery, coverage, and communicative clarity for all questions on the examination;
- The quality of the oral defence of written responses and to questions not answered in writing: in terms of capturing the essence of the questions posed; ability to address the concerns raised and to deliver reasoned answers to legitimate criticisms;

- Oral responses to any questions related to the scope of the exam.

The supervisor should ensure that each committee member is satisfied with the answers to questions that he or she submitted for the examination. The outcome of the comprehensive exam is one of the following:

- Pass
- Conditional Pass. Student must satisfy conditions specified by the exam committee within three months, subject to final approval of the committee or a subset of the committee, which must include the supervisor(s). Failure to satisfy conditions by this date shall result in a failure of the exam.
- Fail. If this is the first failure, the student can repeat the exam within six months. The department will recommend termination of a student's graduate program if the student fails the repeat exam.

Conditions typically imposed for a conditional pass can include re-writing one or more questions or clarifying all or part of an oral answer in writing.

4.3.6.3 Exam Timeline

Year 1 (January-April)	Assemble a supervisory committee
Year 1 (January-June)	Identify areas of concentration and prepare a draft reading list
Year 1 (no later than May-June)	Present a draft reading list to supervisory committee for the first progress meeting
At least 2 months prior to exam	Establish date for approval of the final reading list by the supervisory committee
At least 1 month prior to exam	Student schedules exam and informs the graduate office of the date
Within 3 months of the exam	If the outcome of exam is conditional pass, all conditions must be satisfied
Within 6 months of the exam	If the outcome of exam is a fail and this is the first failed exam, student must repeat the exam

4.3.7 Research Proposal

A Research Proposal must be submitted and defended before the supervisory committee at the research proposal examination. The committee will advise the student on the acceptability of the proposal and will decide on any further steps to be taken in shaping the dissertation research project. The outcome of the proposal exam is one of the following:

- Pass
- Conditional Pass. Student must satisfy conditions specified by the supervisory committee (within three months) subject to final approval of the committee or a subset of the committee, which must include the supervisor(s). Failure to satisfy conditions by this date shall result in failure of the exam.
- Fail. The student must repeat the exam within six months.

The conditions will be attached to the research proposal examination form and typically include requests for revisions to theory and methodology. Examples of requested revisions might include additional reading on theory, reconceptualization of the theoretical approach, or additional research into the feasibility or appropriateness of the methodology. To keep on track for time-to-completion the department recommends the research proposal be defended by June of year two and no later than September of year 3. Normally, all required coursework will have been completed by the time of the research proposal exam but in some cases the research proposal can be presented earlier with the agreement of the supervisory committee.

The research proposal should be prepared when the student has settled on a research topic; completed a preliminary exploration of the sources; and identified the problem and defined a research strategy. Ideally, the research proposal should take the form of a paper of about twenty to forty pages in length which includes a statement of the problem, research questions, a discussion and literature review of the research context in which it is set, research objectives or hypotheses, a brief outline of the data sources and methods, a draft survey or guiding questions for interviews (where appropriate) and a suggested timetable for completion. There should be a discussion of methods and methodology that makes reference to the literature on methodology. The proposal should provide a rationale for the choice of methods and discuss any ethical issues stemming from the research (if appropriate). The research proposal should be defended prior to extensive research. It should not constitute a draft of the final thesis.

It is the responsibility of the student to arrange for a date, time and room for the examination and to provide this information to the graduate office. The graduate office will prepare the examination file that can be collected just before the exam and returned immediately following the exam.

4.3.8 PhD Candidacy

When all requirements exclusive of the thesis have been met, a student has achieved PhD Candidacy. The department requires students to achieve candidacy by the end of year two. School of Graduate Studies policy requires that candidacy is achieved by the end of year three. Students who have not achieved candidacy by the end of year three will not be permitted to register in future sessions unless an extension has been approved.

4.3.9 Good Academic Standing and Satisfactory Academic Progress

Graduate students are required to remain in good standing in their programs and they are required to continually make satisfactory progress toward the completion of their degree requirements. This includes the requirement of minimum grade performance in course work, the successful passage of written and oral examinations among other degree requirements and the speed and timeliness of progression through degree requirements.

Failure to maintain good academic standing or satisfactory progress may result in various sanctions, including ineligibility for fellowships or termination of registration.

4.3.10 The Thesis

The thesis shall constitute a significant contribution to the knowledge of the field and must be based on original research conducted while registered for the PhD program. The topic for the thesis will have been approved at the proposal defence.

The thesis may take one of two forms. The traditional form is a manuscript thesis. An alternative form is the paper thesis.

The paper thesis will normally consist of a minimum of three journal articles considered publishable in, or that have been published in, good quality journals. The journal articles must meet four criteria, as determined by the supervisory committee:

1. The student is listed as the first or sole author of the paper when submitted for publication.
2. The student has done the following: had a primary or significant role in conceptualizing the paper, designing the methodology, collecting and analysing data.
3. The student wrote the first draft, and revised later drafts after feedback from the supervisor, committee members or co-authors.
4. The paper is truly part of the dissertation project (i.e. it would not have been written if not for the student's dissertation and cannot count toward anyone else's dissertation project).

It is recommended that the student and supervisor discuss these criteria and the expectations for authorship of the papers as early as possible and no later than the proposal defense.

Both types of theses should be based on a coherent topic with an introduction presenting the general theme of the research and a conclusion summarizing and integrating the major findings. In the paper thesis, it may be appropriate to pull out common elements of the papers (e.g. methodology or literature review) into a separate chapter. Pagination should be continuous for both types of theses; there should be a common table of contents, appendices as need, and the thesis should have an integrated bibliography.

Information on thesis formatting, copyrighting, etc. is available from the School of Graduate Studies website at <http://www.sgs.utoronto.ca/currentstudents/Pages/Producing-Your-Thesis.aspx>.

4.3.11 Departmental Thesis Examination

The completed PhD thesis will be examined in a Departmental Thesis Examination. The examination committee consists of the supervisory committee. One or more additional members can be from outside the Department of Geography if required. The graduate office must be notified that the exam will take place at least one week prior to the exam date and will prepare the examination file that can be collected just before the exam and returned immediately following the exam.

4.3.12 School of Graduate Studies Final Oral Examination

A Final Oral Examination Committee will conduct the Final Oral Examination (FOE). Departmental policy is that the committee must include six voting members. The examination committee must include no more than three members of the Supervisory Committee (including the supervisor/co-supervisor) and at least three examiners who have not been closely involved in the supervision of the thesis. Eligible for inclusion in the latter group are the external appraiser (in person or by audio connection), members of the geography graduate faculty who have not read the thesis, and members of the graduate faculty of other departments, centres, or institutes of the University who have not read the thesis. A quorum is four voting members (at least one member of the supervisory committee and two external examiners are required for the exam to proceed). The School of Graduate Studies must approve the composition of the FOE committee.

The School of Graduate Studies, on the recommendation of the Associate Chair, Graduate, appoints the external appraiser. The external appraiser must:

- Be a recognized expert on the subject of the thesis and should be external to the University of Toronto;
- Be an Associate or Full Professor at their home institution;
- Have an arms-length relationship with both the candidate and the supervisor;
- Receive a copy of the thesis (from the department) at least six weeks prior to the exam.

Scheduling the Final Oral Examination begins a minimum of seven weeks prior to the proposed examination date. Contact the graduate office for information about the process to request this exam. Detailed rules for the submission of the dissertation, the appointment of an external examiner, the exam procedures and steps to be taken after the exam are set out in the SGS Guidelines for the PhD Final Oral Examination available on the SGS website at

<http://www.sgs.utoronto.ca/currentstudents/Pages/Doctoral-Exams-and-Schedule.aspx>

4.3.13 Submission of the Final Thesis

Once any final revisions or modifications have been made, the final thesis must be submitted to SGS. A bound copy must also be submitted to the department within four weeks of SGS submission. Information on formatting, electronic submission, and copyright is available from the School of Graduate Studies website at <http://www.sgs.utoronto.ca/currentstudents/Pages/Producing-Your-Thesis.aspx>

4.3.14 PhD Final Year Fees

Academic fees for doctoral candidates in the final year of their program are pro-rated based on the twelve-month academic year. Incidental fees are charged on a sessional (term) basis. A Fee Schedule is available at Student Accounts.

The month-to-month fee schedule does not apply to reinstated students. Students who have been reinstated will have received a notice from the School of Graduate Studies stating the terms of his or her reinstatement, along with the total amount owing for the reinstatement.

International students may be eligible for a partial refund of their UHIP. Please note that there are deadlines for such refunds, and students should contact the Centre for International Experience for information on eligibility.

5 Graduate Supervision

5.1 Supervisor

Students will conduct research under the guidance of a faculty supervisor (assigned at admission). The success of a good supervisory relationship is the shared responsibility of both the student and supervisor and involves communication, tolerance and understanding and holding each other to high standards. At the start of a student's program and regularly throughout, the department recommends that students meet with their supervisor and set out clear, shared expectations, discuss intellectual property issues and publication expectations and other matters. The department recommends that students and supervisors review the Graduate Supervision Guidelines available on the SGS website at <http://www.sgs.utoronto.ca/currentstudents/Pages/Find-a-Supervisor.aspx>, and each complete a graduate supervision checklist (contained in the guidelines).

5.2 Supervisory Committee

Doctoral students are expected to form a supervisory committee in consultation with their supervisor by April of year 1. Many students start connecting with committee members earlier, in January of year 1. It is recommended that students meet or take a course with faculty they might want to be on their committee early on to get a sense if a good match of interests exists.

The supervisory committee provides support to the student and supervisor by broadening and deepening the range of expertise and experience available and by offering advice about, and assessment of, the student's work. Students are required to meet with their supervisory committee at least once a year (normally April to June).

Masters students should discuss forming a supervisory committee with their supervisor when they are developing their research proposal (March/April). The supervisor may recommend that establishing a committee early or they may recommend doing this at the writing stage when the student has started to draft a thesis/major research paper.

The supervisory committee (for both PhD and masters) must include:

- a) the supervisor or supervisors;
- b) an additional Geography & Planning graduate faculty member;
- c) one additional graduate faculty member from any graduate unit at the university, including Geography & Planning.

Additional members may be added if necessary.

6 Collaborative Programs

In addition to degree programs, the department is a participating member of several collaborative programs. These innovative programs emerge from cooperation between several units, providing students with a broader base from which to explore a novel interdisciplinary area or special development in a particular discipline, to complement their degree studies.

Collaborative programs provide a structured program of study, including appropriate graduate supervision, courses, and seminars. Students may indicate their interest in admission to a Collaborative program on their application for graduate studies, however most collaborative programs require that students submit a separate application and may have additional admission requirements. Please consult the Collaborative program's website for admission requirements.

All degree requirements of both the degree program and the Collaborative program must be completed. When the requirements of a Collaborative program have been completed, a notation will be added to the student's transcript.

6.1 Environmental Studies (MA, MSc, PhD)

The Environmental Studies (ES) Collaborative Program is offered through the Centre for Environment (CFE) at the University of Toronto. Students pursue coursework and research in environmental areas. The Centre currently has graduate students from across the disciplinary spectrum.

The Centre offers a unique and comprehensive program of graduate study. By utilizing the University's extensive library holdings and faculty resources, it offers one of North America's most engaging and cross-disciplinary programs in the environment. One of the compelling strengths of the Centre's program is the interdisciplinary environment in which teaching and research is conducted. For example, in its core courses, professors from the humanities team teach with faculty from the social sciences, engineering, biology, and chemistry. Students are both able to specialize in an area of environmental research and gain exposure to a wide range of intellectual and methodological disciplines focused on environmental issues.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed Collaborative Program in Environmental Studies".

Program	Specific Coursework Requirements	Total FCE required
MA/MSc Thesis	0.5 FCE GGR1105H or GGR1200H 0.5 FCE elective in geography 0.5 FCE ENV1001H 0.5 FCE CFE elective	2.0 FCE
MA/MSc Research Paper	0.5 FCE GGR1105H or GGR1200H 1.0 FCE geography elective 0.5 FCE ENV1001H 0.5 FCE CFE elective	2.5 FCE Plus completion of 0.5 FCE CFE internship (ENV4444Y)

PhD Physical Geography/Spatial Information Systems	0.5 FCE GGR1200H 0.5 FCE geography elective 0.5 FCE ENV1001H 0.5 FCE CFE elective	2.0 FCE
PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1100H 1.0 FCE geography electives 0.5 FCE ENV1001H 0.5 FCE CFE elective 0.5 FCE elective courses in any subject	3.0 FCE

Please consult the Centre for Environment website at www.environment.utoronto.ca for detailed information about admission and completion requirements.

6.2 Environment and Health (MA, MSc, PhD)

The Environment and Health (EH) Collaborative Program is offered through the Centre for Environment (CFE) at the University of Toronto. The health implications of human impacts on the environment cover a very broad range of issues including air and water quality, contaminated land, and shifts in the distribution of vector-borne diseases (related to changes in land use, climate, and human migration). The EH collaborative program provides students in the health sciences with a broad environmental perspective while at the same time exposes environmental studies students to the health implications of environmental quality. This program may also be of interest to students who are concerned with sociological and policy approaches to the field of environment and health.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in Environment and Health".

Program	Specific Coursework Requirements	Total FCE required
MA/MSc Thesis	0.5 FCE GGR1105H or GGR1200H 0.5 FCE ENV4001H 0.5 FCE CFE elective (must be a geography course)	1.5 FCE
MA/MSc Research Paper	0.5 FCE GGR1105H or GGR1200H 1.5 FCE geography elective 0.5 FCE ENV4001H 0.5 FCE CFE elective	3.0 FCE
PhD Physical Geography/Spatial Information Systems	0.5 FCE GGR1200H 0.5 FCE geography elective 0.5 FCE ENV4001H 0.5 FCE CFE elective	2.0 FCE Plus presentation of a seminar at seminar series or research day

PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1100H 1.0 FCE geography electives 0.5 FCE ENV4001H 0.5 FCE CFE elective 0.5 FCE elective courses in any subject	3.0 FCE Plus presentation of a seminar at seminar series or research day
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Please consult the Centre for Environment website at www.environment.utoronto.ca for detailed information about admission and completion requirements.

6.3 Aboriginal Health (MA, PhD)

The Aboriginal Health collaborative program is offered in collaboration with the Faculty of Arts and Sciences' Aboriginal Studies Program. The main objective of the program is to provide graduate training in Aboriginal health research and practice while enhancing mutually beneficial relationships with Aboriginal communities and organizations.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in Aboriginal Health".

Program	Specific Coursework Requirements	Total FCE required
MA Thesis	0.5 FCE GGR1105H 0.5 FCE geography elective 0.5 FCE Aboriginal Health core course	1.5 FCE Plus participation in the Research Seminar Series and at least one national/regional workshop
MA Research Paper	0.5 FCE GGR1105H 1.5 FCE geography electives 0.5 FCE Aboriginal Health core course 0.5 FCE elective in any subject	3.0 FCE Plus participation in the Research Seminar Series and at least one national/regional workshop
PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1100H 1.0 geography electives 0.5 FCE Aboriginal Health core course 1.0 FCE electives in any subject	3.0 FCE Plus participation in the Research Seminar Series and at least one national/regional workshop

Please consult the Aboriginal Health program website at www.cpah.utoronto.ca for detailed information about admission and completion requirements.

6.4 Asia-Pacific Studies (MA)

The Asia-Pacific Studies collaborative program is designed to provide graduates with advanced training in a particular discipline and in the historical and social science studies of modern East and Southeast Asia. The major topics of emphasis are political economy, modern and contemporary social history, international relations, gender, political and social change, economic development, and cultural studies. The program contributes to the development of an integrated and interdisciplinary research community in Asia-Pacific Studies at the University.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in Asia-Pacific Studies".

Program	Specific Coursework Requirements	Total FCE required
MA Thesis	0.5 FCE GGR1105H 0.5 FCE geography elective 1.0 FCE ASI1000Y	2.0 FCE Plus a working knowledge of an East or Southeast Asian language as needed
MA Research Paper	0.5 FCE GGR1105H 1.5 FCE geography electives 1.0 FCE ASI1000Y	3.0 FCE Plus a working knowledge of an East or Southeast Asian language as needed

Please consult the Asia-Pacific Studies website at munkschool.utoronto.ca/ai-maps/ for detailed information about admission and completion requirements.

6.5 Community Development (MA)

The Community Development collaborative program brings together graduate students and professors from several disciplines and professional programs who have an interest in better understanding the role of communities and civil society organizations in the community development processes that are shaping contemporary societies.

Community development processes are multi-sectoral, involving the economic, social and physical health of communities. The process requires skills in education, planning, policy and political action. Students who want a fuller appreciation of the many dimensions of community development need to draw on several disciplines. The collaborative program in Community Development will allow students in the opportunity to work with faculty from collaborating departments and to tackle research, policy and practice topics that cross disciplinary boundaries. While maintaining the subject area focus of their home department, students in the collaborative program will have the benefit of learning from the approach of other disciplines and professional programs.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in Community Development".

Program	Specific Coursework Requirements	Total FCE required
MA Thesis	0.5 FCE GGR1105H 0.5 FCE UCS1000H 0.5 FCE geography elective from an approved CD list 0.5 FCE elective outside geography from an approved CD list	2.0 FCE Plus participation in a non-credit coordinating seminar on community development.

MA Research Paper	0.5 FCE GGR1105H 0.5 FCE USC1000H 1.5 FCE geography electives, one of which must be from an approved CD list. 0.5 FCE elective outside geography from an approved CD list	3.0 FCE Plus participation in a non-credit coordinating seminar on community development.
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Please consult the Community Development website at <http://www.dlsph.utoronto.ca/page/collaborative-program-community-development-cdcp> for detailed information about admission and completion requirements.

6.6 Diaspora and Transnationalism Studies (MA, MSc, PhD)

Diaspora in contemporary thought involves the shifting relations between homelands and host nations from the perspective of those who have moved, whether voluntarily or not. Diaspora emphasizes the inescapable lived translocal experiences of many migrant communities that exceed the boundaries of the nation-state. Questions of nostalgia, of the dynamics of co-ethnic identification, of the politics of homeland and host nation, and of the inter-generational shifts in responses to all these are central to studies of diaspora.

Transnationalism, on the other hand, focuses on flows and counterflows and the multistriated connections to which they give rise. It encompasses in its ambit not just the movement of people but also concepts of citizenship and multinational governance, the resources of information technology, and the realities of the global marketplace, among others.

Taken together, the two concepts of diaspora and transnationalism enable our understanding of the complex realities of vast movements of people, goods, ideas, images, technologies, and finance in the world today. This Collaborative Program is designed to bring together both social science and humanities perspectives to augment our existing tri-campus undergraduate program and to contribute to increased research collaboration between participants in the program.

Students who complete this collaborative program at the masters level will not be eligible for the program at the doctoral level.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in Diaspora and Transnationalism Studies".

Program	Specific Coursework Requirements	Total FCE required
MA Thesis	0.5 FCE GGR1105H 0.5 FCE geography elective 0.5 FCE DTS1000H 0.5 FCE DTS elective course	2.0 FCE
MA Research Paper	0.5 FCE GGR1105H 1.5 FCE geography electives 0.5 FCE DTS1000H 0.5 FCE DTS elective courses	3.0 FCE

PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1100H 1.0 FCE geography electives 0.5 FCE DTS1000H 1.0 FCE electives in any subject	3.0 FCE
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Please consult the Centre for Diaspora and Transnationalism Studies website at www.cdts.utoronto.ca/ for detailed information about admission and completion requirements.

6.7 Ethnic and Pluralism Studies (MA, PhD)

The Ethnic and Pluralism Studies collaborative program is offered through the Robert F. Harney Professorship and Program in Ethnic, Immigration, and Pluralism Studies at the University of Toronto. The program offers students with interests in ethnic and pluralism studies the opportunity to expand their knowledge beyond a single disciplinary base, and to take advantage of the wealth and diversity of academic resources at the University of Toronto. Courses are contributed by faculty specialists from a variety of departments and disciplines; each provides a distinctive perspective and knowledge-base for the study of topics such as ethnic and race relations, international migration and immigration, cultural and linguistic communities, inter-group dynamics, nationalist movements, aboriginal affairs, and human rights. This wide range of program opportunities makes it valuable for students planning careers in academic research and teaching, policy research, and professional practice and administration.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in Ethnic and Pluralism Studies".

Program	Specific Coursework Requirements	Total FCE required
MA Thesis	0.5 FCE GGR1105H 0.5 FCE JTH3000H 0.5 FCE geography course in ethnicity 0.5 FCE elective in ethnicity which must be outside geography	2.0 FCE
MA Research Paper	0.5 FCE GGR1105H 1.5 FCE geography electives (one of which must be topic in ethnicity) 0.5 FCE JTH3000H 0.5 FCE DTS elective courses (must be outside of geography)	3.0 FCE
PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1100H 1.0 FCE geography electives in ethnicity 0.5 FCE JTH3000H 1.0 FCE elective courses in ethnicity (must be outside geography)	3.0 FCE

Please consult the Ethnic and Pluralism Studies program website at <http://munkschool.utoronto.ca/ethnicstudies/> for detailed information about admission and completion requirements.

6.8 Global Health (PhD)

The Collaborative Program in Global Health integrates methods and insights from the scholarly arenas of the participating partners. It provides a vibrant intellectual community for doctoral students and research faculty to interact and learn from one another. Students are encouraged to think critically about dominant paradigms and to integrate academic research skills in an applied community or policy setting. Graduates of the program will have the skills to work effectively with trans-disciplinary, international teams.

The Collaborative Program views ‘global health’ in an integrative manner. It focuses on the relationships among local, regional, national, and international forces and factors that influence health and on the development of effective interventions and policies that will address or shape these.

Students who complete the collaborative program receive the following notation on their transcripts: “Completed the Collaborative Program in Global Health”.

Program	Specific Coursework Requirements	Total FCE required
PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1105H 1.0 FCE electives in geography 0.5 FCE Global Health core course 0.5 FCE elective course (approved by the CPGH director) outside geography 0.5 FCE CHL5701H research seminar course	3.0 FCE

Please consult the Global Health program website at www.dlsph.utoronto.ca/degree-information/collaborative-doctoral-program-global-health for detailed information about admission and completion requirements

6.9 Jewish Studies (PhD)

The purpose of the Jewish Studies collaborative program is to institutionalize, enhance, and ensure the provision of a well-rounded training in Jewish Studies. An effective balance is struck between the need for disciplinary depth and the need for interdisciplinary breadth. On the one hand, future scholars and teachers in the field of Jewish Studies must be grounded in a particular discipline and master its methods, theoretical frameworks, and body of knowledge. On the other hand, students of any particular aspect of Jewish Studies, e.g., modern Jewish philosophy, Second Temple literature, or medieval Jewish history, would suffer both intellectually and professionally without exposure to the breadth of Jewish civilization. They would suffer intellectually because sophisticated understanding of any one of the major subfields of Jewish Studies—the study of texts (biblical, rabbinic, philosophical, theological, literary, etc.), the study of contexts (historical, social, political, etc.), and the study of concepts (creation, covenant, messianism, etc.)—requires some knowledge of the others. They would suffer professionally because academic positions in Jewish Studies programs throughout North America assume that job candidates are familiar with many aspects of Jewish civilization outside of their particular discipline and area of specialization. This process of broad, interdisciplinary learning is offered to Master’s and Doctoral students in the various fields of Jewish Studies at the University of Toronto.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in Jewish Studies".

Program	Specific Coursework Requirements	Total FCE required
PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1105H 0.5 FCE CJS1000H 0.5 FCE elective in geography course taught by a CJS faculty member 0.5 FCE elective course outside geography taught by a CJS faculty member 0.5 FCE elective in any subject	3.0 FCE

Please consult the Jewish Studies program website at www.cjs.utoronto.ca for detailed information about admission and completion requirements.

6.10 Sexual Diversity Studies (MA, PhD)

The Sexual Diversity Studies collaborative program affords students the chance to develop an interdisciplinary focus on how sexuality is understood and represented in cultural, political, legal, social and religious contexts.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in Sexual Diversity Studies".

Program	Specific Coursework Requirements	Total FCE required
MA Thesis	0.5 FCE GGR1105H 0.5 FCE SDS1000H 0.5 FCE elective in geography on a sexuality topic (to be approved by the director of the collaborative program)	1.5 FCE
MA Research Paper	0.5 FCE GGR1105H 1.5 FCE geography electives 0.5 FCE SDS1000H 0.5 FCE DTS elective courses in any subject At least one of the elective courses from above must be on a sexuality topic (to be approved by the director of the collaborative program)	3.0 FCE
PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1100H 1.0 FCE geography electives 0.5 FCE SDS1000H 1.0 FCE elective courses in any	3.0 FCE

	<p>subject</p> <p>At least one of the elective courses from above must be on a sexuality topic (to be approved by the director of the collaborative program)</p>	
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Please consult the Sexual Diversity Studies program website at www.utoronto.ca/graduate-program for detailed information about admission and completion requirements.

6.11 South Asian Studies (MA, PhD)

The South Asian Studies collaborative program is designed for students who wish to acquire a nuanced understanding of South Asia as a secondary area of specialization while pursuing graduate studies in another discipline. The focus of this program is necessarily broad in that it provides students with an understanding of ancient and modern history, social change, economic development, contemporary politics, religious traditions, literary culture, and a spectrum of related topics.

The Centre for South Asian Studies, which administers the Collaborative Program, provides a nucleus for the participation of South Asian Studies scholars from across the University. Students will benefit from the physical presence of the Centre and its regular activities of research fora, conferences, and visiting lecturer and scholar programs. In addition, the University's library collection in South Asian studies is the largest in Canada.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in South Asian Studies".

Program	Specific Coursework Requirements	Total FCE required
MA Thesis	0.5 FCE GGR1105H 0.5 FCE elective in geography 0.5 FCE SAS2004H	1.5 FCE Plus attendance at visiting lecture series
MA Research Paper	0.5 FCE GGR1105H 1.5 FCE geography electives 0.5 FCE SAS2004H 1.0 FCE elective courses in any subject	3.0 FCE Plus attendance at visiting lecture series
PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1100H 1.0 FCE geography electives 0.5 FCE SAS2004H 1.0 FCE elective courses in any subject	3.0 FCE Plus attendance at visiting lecture series. Students may also be required to acquire proficiency in a South Asian language.

Please consult the Centre for South-Asian Studies website at <http://munkschool.utoronto.ca/program/south-asian-studies> for detailed information about admission and completion requirements.

6.12 Women and Gender Studies (MA, MSc, PhD)

The Graduate Collaborative Program in Women and Gender Studies (CWGS) provides a formal educational context for the pursuit of interdisciplinary research in women and gender studies and advanced feminist scholarship. The program, offered at the master's and doctoral levels, provides a central coordinating structure to facilitate and disseminate research in women and gender studies through student and faculty research seminars, colloquia, circulation of work in progress, study groups, conferences, and publications. The CWGS contributes to the development of an integrated research community in women and gender studies at the University of Toronto.

The program is administered by the Women and Gender Studies Institute (WGSi). The CWGS brings together 33 graduate programs providing more than 100 courses and involving over 100 graduate faculty members.

Students who complete the collaborative program receive the following notation on their transcripts: "Completed the Collaborative Program in Women and Gender Studies".

Program	Specific Coursework Requirements	Total FCE required
MA Thesis	0.5 FCE GGR1105H 0.5 FCE elective in geography with a focus on women's studies 0.5 FCE WGS core course	1.5 FCE Plus attendance at seminar series
MA Research Paper	0.5 FCE GGR1105H 1.5 FCE geography electives 0.5 FCE WGS core course 0.5 FCE elective courses in any subject At least two electives must have a focus on women's studies	3.0 FCE Plus attendance at seminar series
PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1100H 1.0 FCE geography electives 0.5 FCE WGS core course 1.0 FCE elective courses in any subject At least two electives must have a focus on women's studies	3.0 FCE Plus attendance at seminar series

Please consult the Women and Gender Studies Institute website at <http://www.wgsi.utoronto.ca/graduate/collaborative-program> for detailed information about admission and completion requirements.

7 Financial Support

The University of Toronto through the Department of Geography provides funding for all PhD students (years one to four) and all students in a Geography Master's program (for the first year). The base financial support package is \$16,500 per year plus tuition costs. The funding "package" may consist of a combination of Federal and Provincial government scholarships, University of Toronto Fellowships, teaching assistantships and/or research assistantships. Renewal of funding for PhD students, where applicable, requires the demonstration of satisfactory progress towards the degree.

7.1 Scholarships/Fellowships

Current students and eligible prospective students are expected to apply for external scholarships/fellowships. Students in the Department of Geography compete successfully for a variety of scholarship and fellowship support, both within and outside the University. Unlike assistantships, these awards are grants to the students and do not require the student to provide any services to the Department. Some scholarship funds are restricted to Canadian citizens or landed immigrants, others are restricted to foreign students from specific countries or groups of countries, while still others are restricted to students with particular research interests. Students will be advised by the Department's Graduate Student Advisor on what scholarships to apply for, and when to apply. The initiative, however, rests with the student.

The following are among the main types of scholarships or fellowships available.

7.1.1 External Awards

The department expects all eligible prospective and current students will apply for external awards or scholarships. External awards provide generous funding and students are strongly encouraged to apply for these awards. Deadlines and instructions are available from the graduate office in September.

Students must be alert to all of the requirements pertaining to applications for the following year. These include filling out the necessary forms, and obtaining letters of recommendation.

Ontario Graduate Scholarship (OGS)

For full-time graduate studies in Ontario. To apply, an 'A-' average in the final two years of study is required. Valued at \$5,000 per term for a minimum of two terms and up to three terms.

Social Sciences and Humanities Research Council (SSHRC)

Applicants must be Canadian citizens or permanent residents, and have an "A-" average in each of the final two years of study.

- SSHRC Canada Graduate Scholarship (Master's) is valued at \$17,500 for one year
- SSHRC Doctoral Award is valued at \$20,000 for up to four years
- SSHRC Canada Graduate Scholarship (Doctoral) is valued at \$35,000 for up to four years

Natural Sciences and Engineering Research Council of Canada (NSERC)

Applicants must be Canadian citizens or permanent residents, and have an "A-" average in each of the final two years of study.

- NSERC Canada Graduate Scholarship (Master's) is valued at \$17,500 for one year
- NSERC Postgraduate Scholarship (Doctoral) is valued at \$21,000 for up to three years
- NSERC Canada Graduate Scholarship is valued at \$35,000 for up to three years

Canadian Institutes of Health Research (CIHR)

Applicants must be Canadian citizens or permanent residents, and have an “A-“ average in each of the final two years of study.

- CIHR Master’s Award: Canada Graduate Scholarship is valued at \$17,500 for one year
- CIHR Doctoral Research Award: Canada Graduate Scholarship is valued at \$35,000 for up to three years

Vanier Award (SSHRC, NSERC and CIHR)

Applicants must have an “A-“ average in each of the final two years of study.

- SSHRC, NSERC and CIHR Vanier Awards are valued at \$50,000 for up to three years

Trudeau Scholarship

Applicants must be entering or registered in their first year of PhD studies and must have achieved high academic standing. The award is valued at up to \$40,000 stipend and \$20,000 travel allowance for up to three years.

7.1.2 University of Toronto/SGS Awards

In addition to the awards listed below, the School of Graduate Studies maintains a comprehensive listing of scholarships and awards available through the university. This listing is available on the SGS website.

Connaught Scholarships

The Connaught Scholarship is a prestigious entrance award intended to attract excellent international doctoral students. The award is open to all disciplines. The effective value awarded to each student will be \$35,000 total (including tuition).

Ontario Trillium Scholarship

The Ontario Trillium Scholarships (OTS) program is a prestigious entrance award intended to attract more of the best qualified international students to Ontario for PhD studies. This program supports the 2010 Open Ontario commitment to increase the number of international students in Ontario while maintaining spaces for qualified domestic students.. The effective value to each student in 2012-2013 will be \$40,000 total (including tuition)

W. Garfield Weston Doctoral Fellowship

The W. Garfield Weston Doctoral Fellowship Program are awarded each year to 16 Canadian doctoral students from the University of Toronto—across the humanities and the social, physical and life sciences—a travel award of \$50,000 to further their research and broaden their skills and networks in a global setting.

Doctoral Completion Award

The Doctoral Completion Award is available for doctoral students in the first year beyond the funded cohort. Applications are submitted to the department. The award value varies depending on resources available and number of eligible applications received.

SGS Travel Grant

The SGS research travel grant is available to help fund travel for doctoral students within Divisions I and II only for whom travel is essential for the completion of their research and doctoral program. Please note that travel to conferences is not eligible within this grant.

Grant values vary. Not all projects are funded and the funding awarded may not cover the entire amount requested by the applicant.

7.1.3 Faculty of Arts & Science Awards

A listing of awards and application details is available at <http://www.artsci.utoronto.ca/graduate/scholarships>. The awards listed in this section have a March 15 application deadline.

Andrea and Charles Bronfman Student Awards in Israeli Studies

Awarded to a domestic graduate student undertaking research or study in Israel. Financial and academic merit will both be considered.

Associates of the University of Toronto Awards for Study of the United States

Awarded to a domestic graduate student undertaking research/study related to United States. Financial need and academic merit will both be considered.

Barbara Frum Memorial Award in Canadian Scholarship

Awarded to a graduate student enrolled in the first year of a doctoral-stream program who is undertaking study related to Canada.

Dipty Chakravarty Bursary for Bengali Studies (Bangla Studies)

Awarded to a domestic graduate student pursuing research related to Bengal, and who intends to study in India/Bangladesh for a minimum of 24 weeks. Financial need will be considered.

Dr. David Chu Scholarships in Asia Pacific Studies

Awarded to a domestic graduate student who is pursuing study or research related to the Asia Pacific region (east and southeast Asia). Financial need will be considered.

General Motors Women in Science and Mathematics Awards

Awarded to a domestic woman graduate student enrolled in a program in science or mathematics. Financial need will be considered.

Ukrainian Studies Scholarships

Three scholarships are available: the Dmytro and Natalia Haluszka Family Scholarship in Ukrainian Studies, the Dr. Roman Turko and Yaroslawa Turko Scholarship in Ukrainian Studies, and the Ivan Bodnarchuk Scholarship in Ukrainian Studies. Awarded to a domestic graduate student undertaking research or study related to the Ukraine. Financial need will be considered.

Vivian Poy Chancellor's Fellowship in the Humanities and Social Sciences

Awarded to a domestic graduate student who is enrolled in a doctoral-stream humanities or social science program. Financial need will be considered.

Walter and Mary Tuohy Award in Arts and Science

This award alternates on an annual basis between graduates and undergraduates. Awarded to a domestic graduate student who is undertaking a period of study at an international post-secondary institution or pursuing international field work. Financial need and academic merit will both be considered.

7.1.4 Departmental Awards

The Department is grateful for the generous support of graduate students by its members, alumni and friends. The contributions are reflected in the following Departmental awards.

Graduate Alpar Grant

Established in honour of the late Zehra Alpar, the department's student advisor for many years spanning the 1960s through 1990s and generously supported by the alumni and friends of the Department of Geography and matched by the Ontario Student Opportunity Trust Fund (OSOTF), Endowed Adjustment Fund (EAF) and the Ontario Trust for Student Support (OTSS). It is awarded to a graduate student registered with the Department of Geography and Program in Planning who is making good progress to the completion of the degree requirements.

Graduate Alpar Scholarship

Established in honour of the late Zehra Alpar, the Department's student advisor for many years spanning the 1960s through 1990s on the occasion of her retirement in 1994 and generously supported by the alumni and friends of the Department of Geography. It is awarded to a graduate student registered with the Department of Geography and Program in Planning who is making good progress to the completion of the degree requirements.

John D. Barnes Geodetic Sciences Fellowship

Established by the Estate of John Duncan Barnes. It is awarded to a graduate student enrolled in a program in Geography, where preference will be given to a student(s) who is doing graduate work in the field of geographic information systems/geomatics.

Graduate Geography and Planning Student Society (GGAPSS) Endowed Bursary

Established through the generous donations of current students, alumni, family, friends and colleagues of the graduate program in Geography and Planning and matched by OSOTF and EAF. It is awarded to graduate students in the Department of Geography, on the basis of financial need and academic merit.

John Horner Graduate Scholarship in Geography

Established by alumnus John H.R. Horner (BA, Geography, 1962; MA, Geography, 1967). It is awarded to a graduate student in the Department of Geography based on academic merit, where financial need will also be considered.

Alexander B. Lemman Memorial Award

Established by the Lemman in memory of Alexander B. Lemman, Ing.Arch., FRAIC, FRSA, (1926-2010) an architect and urban planner who founded his own architectural firm (1958) as well as Lemman Group Inc., (1972) an urban development and planning consulting company. A Fellow of the Royal Architectural Institute of Canada and Fellow of the Royal Society for the Arts, London, UK, he served as President of the Ontario Association of Architects as well as President of the World Society for Ekistics. It is awarded to a graduate student enrolled in the collaborative program at the Centre for Environment and the Department of Geography's Program in Planning, based on academic merit and financial need.

James T. Lemon Memorial Scholarship in Geography

Established by the friends, family and colleagues of James. T. Lemon. It is awarded to a graduate student in urban and historical geography, with special consideration to students whose research speaks to issues of social justice, based on academic merit and financial need.

Joseph A. May Scholarship

Established by the family, friends, and colleagues of the late Professor Joseph A. May, Department of Geography. It is awarded to a 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; and social and cultural geography; geography of Canada.

Joseph A. May OSOTF Scholarship

Established by the family, friends, and colleagues of the late Professor Joseph A. May, Department of Geography and matched by OSOTF. It is awarded to a 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; and social and cultural geography; geography of Canada.

Oscar J. Marshall Graduate Fellowship

Established by the Estate of Oscar Charles Joseph Marshall. It is awarded to a graduate student enrolled in a program in geography, who is doing graduate work in the field of geographic information science/land information systems/geomatics/remote sensing.

Graduate Anne McMaster Grant

Established by the alumni and friends of the Department of Geography, in honour of Anne McMaster, former business officer, who provided over 27 years of outstanding service to the Department, on the occasion of her retirement in 1994. It is awarded to a graduate student registered with the Department of Geography and Program in Planning, on the basis of financial need, where academic merit may also be considered. The award is intended to cover costs such as departmental field trips, field courses, professional experience courses, etc.

Graduate Anne McMaster OSOTF Award

Established by the alumni and friends of the Department of Geography, in honour of Anne McMaster, former business officer, who provided over 27 years of outstanding service to the department, on the occasion of her retirement in 1994. It is matched by OSOTF and EAF. It is awarded to a graduate student registered with the Department of Geography and Program in Planning, on the basis of financial need, where academic merit may also be considered. The award is intended to cover costs such as departmental field trips, field courses, professional experience courses, etc.

Donald F. Putnam Graduate Scholarship

Established by through the generous donations of the alumni and friends of the department of Geography. It is awarded to a graduate student concentrating in physical and environmental geography with outstanding achievements, who is entering or continuing in a research oriented degree program.

J.E.R. Ross Scholarship

Established by Mrs. Margaret E. Ross. It is awarded to a graduate student enrolled in a program in geography and who is making good progress towards their degree.

George Tatham/Geography Alumni Graduate Scholarship

Established through the generous donations of the alumni and friends of the Department of Geography & Program in Planning. It is awarded to a graduate student registered in Full-time studies in the Department of Geography and Program in Planning on the basis of academic merit.

The Griffith Taylor Scholarship in Geography

Established through the generous donations of the friends, colleagues, admirers of Griffith Taylor and alumni. It is awarded to a graduate student registered in the Department of Geography and Program in Planning based on academic merit.

Ontario Graduate Scholarship (OGS) Endowed Awards

Available to students who hold Ontario Graduate Scholarships:

- Donald F. Putnam/George Tatham OGS in Geography
- Neptis Foundation OGS in Geography

- J.M. Tomczak / OGS in Geography
- Michael Ralph Walsh OGS in Geography

Queen Elizabeth II Graduate Scholarships in Science and Technology (QEII-GSST)

The Queen Elizabeth II Graduate Scholarships in Science and Technology (QEII-GSST) 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 from the private sector.

- William G. Dean QEII-GSST in Geography (physical geography)
- ESRI Canada QEII-GSST in Geography (GIS or spatial analysis)

7.2 Teaching Assistantships

Teaching assistants provide a variety of services to undergraduate courses including marking assignments and running tutorials and laboratory sessions. Duties, including preparation time, are not recommended to exceed an average of five or ten hours per week over the academic term. Teaching assistants may hold a fellowships and research assistantship as well, though fellowship restrictions may limit the time available for employment. A teaching assistantship may be a required element of a “funding package”. Refusal to accept a teaching assistantship may lead to a reduction in the funding level.

7.3 Research Assistantships

There are a number of opportunities for students with special research skills to assist staff of the Department with research projects and contracts. Rates of pay and time requirements vary. A research assistantship may be a required element of a “funding package.” Refusal to accept a research assistantship may lead to a reduction in the funding level.

8 Courses

8.1 Selecting Courses

Students should consult with their supervisor before selecting courses. Supervisors may require that students enrol in courses she/he teaches, or may have other suggestions for courses which may be appropriate for a student's research interests.

8.2 Timing of Courses

There is no departmental requirement to take a particular number of courses during any given session. Normally coursework is spread over the fall and winter sessions and the number taken in a term may vary depending on what's available and the student's research interests. Generally, students take up to three courses per term but may take more or less. For master's students, the expectation is that coursework is completed by end of April year 1 and for PhD students by end of year 1.

8.3 Courses Outside the Department

Each department has their own course enrolment procedures. Students should contact the Graduate Administrator in the department hosting the course for instructions.

8.4 Geography & Planning Courses

Courses are available on demand and subject to faculty resources. Consult the Graduate Geography Course Timetable on the website for availability. The GGR designation refers to geography courses, the JPG designation refers to joint planning-geography courses.

Courses marked with an asterisk (*) are taught by geography graduate faculty members and are offered through other departments. Enrolment in these courses is subject to available space and permission of the host department.

8.4.1 Core and Reading Courses

GGR 1105H Human Geography Core Course (MA level)

(S. Wakefield)

This course is primarily aimed at MA students, but would be open, with instructor approval, to PhD students as well. The course will feature discussion of a number of issues pertaining to what life is like as an academic and some of the related skills and experiences that go along with it (e.g., the tenure process, journal peer review processes, tips on how to publish journal articles, research collaboration, conference presentations, teaching, the academic job market, relationship between academia and the wider world, public intellectualism, theoretical versus applied work, etc.). In addition, it will include engagement with non-academic career trajectories, including how skills and experiences from graduate school can contribute to (or hinder?) success in policy deliberations, activism, government and non-profit work, etc. It will also encompass an overview of non-profit work, major debates in the field, and of theory and explanation in geography. The course incorporates a workshop on proposal writing or research statement element for MA students.

The main difference between GGR 1105H and GGR 1110H is in the reading load but also the contrast in specific goals. Specifically, GGR 1110H emphasizes critical reading and thinking drawing on contemporary texts by or relevant to geographers, discussion of readings and the role of theory and evidence in explanation, and perhaps also paying explicit attention to different writing styles. GGR 1105H is more of a wide ranging course but with some emphasis on practical survival tips for academic and related spheres of life.

GGR 1110H Issues in Geographical Thought and Practice (PhD level)

(M. Farish)

How do geographers go about addressing the challenges and problems of the world? How does the wider context (social, institutional, environmental...geographical!) shape the kinds of issues geographers examine, how these issues are framed, and how they are addressed? How do broad intellectual currents influence the work that is done in geography (and vice versa), and how do we understand the relationships between the broad intellectual currents and the “world out there”? Consistent with current emphasis in critical geography, all geographers, whether explicit or not, are using both theory and so politics in their work, along with some implicit or explicit problem statement in framing what they look at and what are they trying to explain. Even the choice of phenomena to examine is a political choice. Thinking carefully about these issues helps to understand the relationship between scholarship (geographical or otherwise) and the “real world”, while at the same time facilitating reflexive and careful consideration of research topics and approaches. This is, in our view, preferable to relying uncritically on policy or academic discourses and their prevailing theories, debates, questions, and approaches.

GGR 1200H Physical Geography Core Course

(D. Harvey, Y. He)

This is a mandatory core course for all first year physical geography (MSc and PhD) graduate students. The main objective is to introduce students to successful approaches in graduate school and for conducting scientific research. Specifically, topics will include: fellowship application, literature review, experimental design, presentation skills, proposal preparation, and disseminating scientific research. It also will provide an overview of physical geography as a discipline and include guest presentations by members of each of the four newly established physical geography research clusters. The course will foster intellectual interactions and build support within student cohorts and include mandatory attendance at departmental and university seminar series. Doctoral students who completed their Master’s in Physical Geography in this department and who took this course as a Master’s student are exempted from taking this course as part of their doctoral course work. Following discussion between student, supervisor, and the Associate Chair, Graduate, exemption from this course may also be granted to certain PhD students who have taken an equivalent course as part of their MSc programme.

GGR1149H Readings in Selected Topics (MA/MSc level)

Contact the graduate office for details.

GGR2149H Readings in Selected Topics (PhD level)

Contact the graduate office for details.

GGR2150H Advanced Seminars in Selected Topics (PhD level)

Contact the graduate office for details.

8.4.2 Research Methods

JPG1111H Research Design

(K. Wilson)

This course will introduce students to philosophical and methodological approaches to research in geography. Through seminar and lecture modules, students will acquire an understanding of different research paradigms, quantitative and qualitative methods, and the knowledge necessary for developing sound and reflective geographic research strategies. The goals of the course will be to provide students with the knowledge needed to effectively evaluate research, understand the process of research design, formulate research questions and develop a geographic research proposal.

JPG1140H Discourse Analysis

(N. Klenk)

Material covered includes situating discourse analysis in the interpretive social sciences; traditional discourse analysis methodologies; textual network analyses. Students would also learn how to use network analysis software (Automap, UCINET, Concept Systems).

JPG1400H Advanced Quantitative Methods

(S. Farber)

Spatial Analysis consists of set of techniques used for statistical modeling and problem solving in Geography. As such, it plays an integral role in the detection of spatial processes and the identification of their causal factors. It is therefore a key component in one's preparation for applied or theoretical quantitative work in GIScience, Geography, and other cognate disciplines. Space, of course, is treated explicitly in spatial analytical techniques, and the goal of many methods is to quantify the substantive impact of location and proximity on human and environmental processes in space.

8.4.3 Physical Geography

GGR1202H Sedimentation and Fluvial Geomorphology

(J. Desloges)

Elements of drainage basin morphology and hydrology, classification of rivers, stream patterns, and hydraulic geometry. Elements of open channel flow, sediment transport, channel change mechanisms and human impacts on river development.

GGR1215H Advanced Watershed Hydroecology

(J. Chen)

Hydrology and ecology are inter-related disciplines in Earth science. Hydroecology is a branch of ecology with emphasis on the effects of hydrological processes on living and non-living organisms and on their relationships in terrestrial and aquatic ecosystems. In particular, the redistribution of water over the landscape through surface and subsurface water flows regulates energy, mass and carbon fluxes from the land surface to the atmosphere, affecting the plant distribution and productivity as well as regional and global climate. In this course, a user-friendly, menu-driven hydroecological model will be used in practice to give a hands-on experience for modeling. Methods for handling spatial datasets, including those derived from remote sensing, will also be taught. About 2/3 of course time is devoted to lecturing the basic principles, concepts and related equations, and 1/3 for conducting a research project using the hydroecological model. The list of topics for the project will be suggested, but it can also be self-chosen.

GGR1216H Advanced Biogeochemical Processes

(I. Lehnherr)

Biogeochemistry explores the intersection of biological, chemical, and geological processes that shape the environment. In an era of unprecedented human-induced environmental and climate change, research in this field is advancing rapidly. This seminar course explores the processes underlying biogeochemical cycles primarily in terrestrial ecosystems and examines how humans alter these cycles. Topics include soil microbial and plant-mediated carbon and nutrient cycling in ecosystems, controls on greenhouse gas fluxes and climate change mitigation strategies in soils, the role of biological diversity in biogeochemical processes, and exploration into how new molecular and isotope techniques are improving the study of biogeochemical processes. More emphasis is placed on terrestrial ecosystems and environmental issues relevant to Canada and on often under-reported microbial control of biogeochemical cycles.

GGR1217H Arctic Environments

(L. Brown)

High latitude environments are becoming the focus of increasing scientific attention because of their role in global environmental change. The implications of changes occurring to the sea ice and snow cover are far reaching and can have impacts on physical, biological and human systems both within and beyond the region. This course will provide a comprehensive examination of climates of high latitudes. Topics that will be covered include the Arctic energy budget and atmospheric circulation, the hydrologic cycle in the Arctic, the ocean-sea ice-climate interactions and feedbacks, modelling the Arctic climate system as well as an evaluation of recent climate variability and trends. Exclusion: GGR484H4

GGR1302H Advanced Hydrology and Water Quality

(T. Duval)

This course will take a hydrological perspective in examining the landscape controls on surface water quality. We will consider how the study of surface water and ground water hydrology lead to an understanding of stream water chemistry through the examination of hydrological flowpaths and the chemical interaction of water and the matrix/matrices through which it flows. An advanced understanding of hydrological processes will be emphasized. Pertinent field and laboratory techniques will be introduced. Pre-requisites: GGR 309H/315H, OAC Chemistry or equivalents. Exclusion: GGR407H (UTM).

JFG1610H Sustainable Forest Management Certification

(T. Smith)

The field and practice of sustainable forest management and certification are rapidly evolving. This course is designed to provide an overview of sustainable forest management policies and programs from a provincial, national and international perspective. Through the implementation of such policies and programs, various outcomes should be achieved (ecological sustainability, biodiversity conservation, economic stability and community longevity). Historical perspectives, current initiatives and future opportunities are reviewed. The successes achieved by the implementation of such a program are measured through the use of criteria and indicators and certification processes. The ISO, SFI, the Canadian Standards Association, the Forest Stewardship Council and other certification processes are studied.

***EES1118H Fundamentals of Ecological Modelling**

(G. Arhonditsis)

This course provides an introduction to the rapidly growing field of ecological and environmental modelling. Students will become familiar with most of the basic equations used to represent ecological processes. The course will also provide a comprehensive overview of the population and dynamic biogeochemical models; prey-predator, resource competition and eutrophication models will be used as illustrations. Emphasis will be placed on the rational model development, objective model evaluation and validation, extraction of the optimal complexity from complicated/intertwined ecological processes, explicit acknowledgment of the uncertainty in ecological forecasting and its implications for environmental management.

***EES1119H Quantitative Environmental Analysis**

(G. Arhonditsis)

This course provides an introduction to the field of ecological statistics. Students will become familiar with several methods of statistical analysis of categorical and multivariate environmental data. The course will provide a comprehensive presentation of the methods: analysis of variance, regression analysis, structural equation modeling, ordination (principal component & factor analysis) and classification (cluster & discriminant analysis) methods, and basic concepts of Bayesian analysis. Emphasis will be placed on how these methods can be used to identify significant cause-effect relationships, detect spatiotemporal

trends, and assist environment management by elucidating ecological patterns (e.g., classification of aquatic ecosystems based on their trophic status, assessment of climate variability signature on ecological time series, landscape analysis). The course will consist of 2 hr-lectures/tutorials where the students will be introduced to the basic concepts of the statistical methods and 2-hr lab exercises where the students will have the opportunity to get hands-on experience in statistical analysis of environmental data.

***EES1126H Hydrology and Watershed Management**

(C. Mitchell)

This new course focuses on the use of various isotopes and chemical factors for furthering our understanding of complex environmental problems, ranging from the characterization of freshwater resources to contaminant transport in aquatic systems. Particular focus will be placed on how chemical and isotope tracer studies can be coupled with physical measurements to understand complex problems in hydrology, biogeochemistry, and contaminant transport. This course will cover fundamentals of environmental tracer chemistry through to recent case studies, advanced models and applications.

***EES1128H Biophysical Interactions and Managed Environments**

(M. Isaac)

This course will focus on biophysical interactions at the advanced level, incorporating specialized concepts on plant-soil relationships, biogeochemical cycles, and ecosystem functioning in managed forests and agriculture. Students will be provided the opportunity to engage with course topics in seminar, field and laboratory format. Sampling and analytical techniques covered are in-situ soil and leaf-level gas exchange analysis, soil sampling, preparation and elemental analysis, and quantification of plant metrics. By the end of this course, students will have an understanding of the complexities and dynamics in managed environments, specifically ecosystem structure and function, soil fluxes including decomposition and mineralization processes, plant growth and nutrition, and production-diversity relationships.

***EES1133H Climate Change Science and Modelling**

(T. Mohsin, W. Gough)

The course is designed to introduce the fundamental concepts underlying our current understanding of the climate system. The science of climate includes basic radiation physics and dynamics, which are the basis of modern climate modelling. The changes in the radiation energy budget will be examined in terms of natural variability and anthropogenic activities, in particular, greenhouse gases and their sources and sinks. Underlying physical processes that shape our climate will be explored e.g. solar variability, orbital mechanics, atmospheric and oceanic circulation, and volcanic and atmospheric aerosols. In addition, the types of climate modelling experiments performed with modern climate models and scenarios will be reviewed by focusing on the evidence for past and present climate change. The latest projections of future climate on a variety of temporal and spatial scales will also be presented and evaluated. This course is aimed at connecting the essentials of climate science and modelling, and training students to interpret the results of modelling experiments.

***ESS1136H – Climate Change Adaptation**

(N. Klenk)

This graduate course will focus on adaptation science and practice at local, provincial, national and international scales. Students will learn about how climate change adaptation is perceived, studied and performed by civil society groups and governments through various theoretical perspectives: resilience theory, neo-liberal theory and critical theory. Students will also learn about different governance approaches that support adaptation: multi-level, poly-centric, experimental and anticipatory governance arrangements. Using case studies ranging from local adaptation planning in Canada to the IPCC's contributions to knowledge synthesis, students will gain a better understanding of the social, economic,

political and ethical dilemmas at the core of adaptation science and practice. Combined lecture-seminar format.

8.4.4 Environmental Geography and Resource Management

JPG1402H Environment and Development

(A. Boland)

Examines the relationship between environment and development. After consideration of key theoretical frameworks for understanding the links between the two, we will focus on case studies from regions typically considered sites for development (i.e., the Third World), as well as from advanced capitalist and transition economies.

JPG1403H Political Ecology of African Environments

(T. Kepe)

This course introduces, and makes argument for use of, political ecology approach to understand environmental challenges facing the African continent. With widespread concerns about degradation of and conflicts over natural resources (land, flora and fauna) dominating environmental policies in Africa, the political ecology approach seeks to encourage an understanding of how politics, the economy, history and culture shape and are in turn shaped by interactions of people with the physical environment. Several topics are explored and these include poverty and environment; environmental degradation narratives and their origins; politics of conservation and land and resource rights.

GGR1404H Issues in Global Warming

(D. Harvey)

This course presents a comprehensive overview of the greenhouse gas/global warming issue, its relationship to other atmospheric environmental problems, and policy options at the local to international scale.

GGR1406H Sustainable Building Energy Use and Supply

(D. Harvey)

Energy use in buildings accounts for about 40% of total world energy use and fossil fuel-related greenhouse gas emissions. This course examines steps that could be taken to eventually supply the energy needs of the world's buildings entirely from renewable energy sources. The single most important step in that process is to dramatically reduce the energy requirements of new buildings compared to recently completed new buildings, and to achieve deep savings through retrofits of existing buildings, so much of the course will deal with energy savings opportunities in buildings. Having reduced energy requirements by a factor of 3-4 in this way, the next step is to meet the remaining energy needs through some combination of on-site renewable energy supply, through community-level renewable energy systems, or by provision of renewable electricity through the grid from regions where renewable energy is available on a large scale. As wind and solar energy are capable of providing the necessary energy after implementation of efficiency measures, the course finishes with a critical discussion of these energy sources. For both energy efficiency and energy supply, the focus is on the understanding of how the measures under consideration work, what their limitations are, and their economic costs.

GGR1407H Efficient Use of Energy

(D. Harvey)

The course examines the options available for dramatically reducing our use of primary energy with no reduction in meaningful energy services, through more efficient use of energy at the scale of energy-using devices and of entire energy systems. Topics covered include generation of electricity from fossil fuels and energy use in buildings, transportation, industry, and agriculture. Each topic will cover (i) the underlying physical principles that determine the potential of and the limits to energy efficiency

improvements, (ii) the difference in potential savings when focusing on individual energy using devices rather than entire energy-using systems, (iii) examples of efficiency improvements that have been achieved in practice in various countries around the world, and (iv) the cost and financing of energy efficiency improvements. As well, the role of the so-called rebound effect in eroding the energy-saving benefit of efficiency improvements will be discussed.

Exclusion: GGR347

GGR1408H Carbon-Free Energy

(D. Harvey)

The course examines the options available for providing energy from carbon-free energy sources: solar, wind, biomass, hydro, oceanic, and geothermal energy, as well as through sequestration of carbon from fossil fuel sources. The hydrogen economy is also discussed. For each carbon-free energy source, the physical principles, physical or biophysical limits, efficiencies, and other constraining factors are discussed, as well as examples of current applications, current and projected future costs, and possible future scenarios. The course concludes by combining the main conclusions for JPG 1407H concerning the prospects for reducing energy demand through improved energy efficiency, with the conclusions drawn in this course concerning the feasibility of large-scale carbon-free energy, to generate scenarios of future greenhouse gas emissions, showing the range of possible consequences for global mean temperature, sea level rise, and ocean acidification.

Exclusion: JPG 1406H

JPG1410H Institutional and Organizational Ecology

(K. MacDonald)

This seminar focuses on the role of institutions in structuring nature-society relations and environmental management. As property relations are restructured, and management responsibilities both centralized and decentralized in different parts of the world, institutions historically responsible for governing human-environment relations morph and are often displaced by spatially and ideologically distant realms of authority, including international non- and inter-governmental organizations. Readings and discussion in this seminar focus on, among other topics, understanding the effect of institutions on local ecosystem dynamics, factors contributing to institutional resilience and vulnerability, institutional production of environmental knowledge, and methodological tools and approaches required to understand new and emergent institutional contexts of environmental production.

JGE1413H Workshop in Environmental Impact Assessment

(TBA)

Lectures and workshops examine the major methodologies and techniques used in environmental impact assessment and allow the student to apply these to relevant planning situations.

JPG1415H Global Environmental Justice and Social Movements

TBA

JPG1416H Environmental Consequences of Land Use Change

(T. Conway)

This reading seminar focuses on land use/land cover within a global environmental change framework. Changing land use/land cover, alongside climate change, has emerged as a key component of environmental change research, with researchers from both the social and physical sciences contributing to the growing body of literature. The course begins by exploring the processes and consequences of land use changes. This is followed by an examination of the approaches to studying historical, current, and future land use/land cover. The course ends with a detailed examination of two key topics: tropical deforestation and North American suburban development. Throughout the course issues associated with

bridging the gaps between the social and natural sciences, connections between global and local processes, and the role of individual decision-makers will be considered.

JPG1419H Aboriginal/Canadian Relations in Environmental and Resource Management

(D. McGregor)

The course will explore the relationship between Aboriginal and non-Aboriginal peoples in Canadian society from pre-European contact to the present. The relationship between Aboriginal and non-Aboriginal peoples in Canada shapes historical and current views of environmental and resource management in a variety of ways. Economic, environmental, political, social and cultural aspects will be discussed.

JGE1420H Urban Waste Management: an International Perspective

(V. Maclaren)

The course presents an overview of urban waste management practices in developing urban areas, with comparative reference to Northern cities. The emphasis of the course is on the linkages among the technical, social, economic and political aspects of solid waste management. The main examples will come from Asia and Canada. Aspects of solid waste management planning to be covered in the course include: identification of waste problems (social, technical and managerial), development of alternative waste management strategies (including source reduction, reuse, recycling, composting, incineration and landfilling), and factors (social, economic, political and technical) contributing to the success of such strategies.

JPG1421H Health in Urban Environments

(S. Wakefield)

This course explores ways of theorizing, evaluating, and improving health in urban areas. Through readings, group discussion, and individual and group inquiry, students will examine the key mechanisms by which urban environments (broadly defined) impact on the people living in them, and how - and to what extent - urban residents can in turn alter their environments to facilitate health. While this course is grounded in the practice-oriented discourses of urban planning and health promotion, a critical awareness of, and debate about, the strengths and limitations of various approaches to promoting and maintaining the health of urban residents in both developed and developing countries will be encouraged.

JPG1423H Political Ecology of the Global Agrifood System

(TBA)

As food and agriculture move increasingly to the centre of many apparently disparate social, political and economic dilemmas, a modernist legacy focused on industries and cities has left most theories, policies, and government institutions ill equipped to interpret agrofood systems. This course introduces academic debates and multiscale policy initiatives linking land use, food safety, knowledge/intellectual property, health and environmental effects of different farming systems, and other emergent linkages.

JPG1424H Comparative Farming Systems

(TBA)

Issues related to farming systems, agricultural policies, and agrarian social movements are increasingly coming into public contestation. The course offers an introduction to historical and contemporary debates about the agrarian question, including social relations of production, technologies, knowledge, and fit with agroecosystems. It explores farming systems in North and South, as well as contemporary intergovernmental, expert and social movement approaches to agricultural policies and the place of farming in society.

JGE1425H Livelihoods, Poverty and Environment in the Developing Countries

(C. Abizaid)

The livelihoods of the rural (and in some cases the urban) poor in the developing world are closely connected to the environment. Hundreds of millions of people, including many indigenous and other traditional peoples, rely directly upon natural resources, at least in part, for their subsistence and often, also, for market income. For many of them, access to such resources is a matter of survival-of life or death, a way of life, or the hope for a better future for them or for their children. Although the livelihoods of these peoples are sometimes regarded as having a negative impact on the environment, more recently, many of them are being heralded as models for biodiversity conservation and sustainable resource. A better understanding of how the rural (and urban) poor make a living -their livelihoods- is considered key to addressing issues of poverty and sustainable resource use, and also for environmental change mitigation and adaptation. This course seeks to develop an understanding of livelihoods among the poor in developing countries, with a focus on how assets, social relations and institutions shape livelihood opportunities in the present and into the future. More broadly, attention will be paid to the ways in which livelihoods are connected to the environment, but also to economic and political processes, with an eye to gain insight on their potential for poverty alleviation, sustainable resource use, and environmental change mitigation/adaptation. The course will also explore emerging areas of inquiry in livelihoods research.

JPGR1426H Natural Resources, Difference and Conflict

(S. Mollet)

This course is concerned with the ways in which international development policies governing natural resource use, access and control reproduce difference and inequality, and how together these processes fashion conflict. Through attention to the entanglements of environment, difference and inequality, a core aim of this seminar is to interrogate what is taken as given in the governing instruments and institutions shaping natural resource policies that inform development activities from oil and mineral extraction to land and territorial demarcation, and tourism to name a few.

Three overlapping themes will guide this seminar. First, we will explore historical and geographical perspectives of natural resource conflicts with attention to post-colonial, post-structural and feminist theorizations of development as a way to understand the woven relations of environment, difference and conflict. Second, we will examine the contemporary role of the state in the provocation and abatement of natural resource conflict and work to unpack the meanings of conflict itself. Third, we will investigate how multiple forms of difference and their intersections (caste, class, gender, race, sexuality, nationality etc.) are materially and symbolically imbued in natural resource policy. Together, our seminar discussions, readings, films, and news analyses will address a number of conceptual and empirical debates and policy-related discussions in geography, planning and development studies.

JPG1427H (Re)Localization of Food

(P. Desrochers)

The course will take an in-depth and critical look at current proposals to "re-localize" our food system through the (re)development of urban agriculture and shorter supply chains. It will survey recent policy reports and proposals and take a broader historical perspective on the rationale behind the development of the long distance trade in food products and inputs.

JPG1428H Managing Urban Ecosystems

(T. Conway)

This reading seminar focuses on the different ways people interact with and manage urban ecosystems. The course begins by exploring the characterization of cities as ecosystems. We will then examine the socio-ecological research and management goals that draw on and build from an urban ecosystem perspective. Management of urban climates, hydrology, and vegetation will be explored. The role of municipal policy, built form, residents and other key actors will be examined in-depth. Throughout the

course, issues associated with bridging knowledge gaps between the social and natural sciences, unique characteristics of urban ecosystems, and the role of individual decision-makers will be considered.

JPG1429H Political Economy of Food and the Agrarian Question

(M. Ekers/R. Isakson)

This course examines the often forgotten roots of contemporary debates in political ecology and food, that is, the enduring agrarian question. The agrarian question examines the extent to which capital has transformed agricultural production and the degrees to which producers have been able to resist dispossession and the industrialization and capitalization of agriculture. Arguably, access to food and the viability of alternative and conventional agriculture is shaped by the particular, and at times limited, ways that capital takes hold of agrarian production processes and transforms small-scale and peasant farmers. This course examines these questions through a series of historical and geographical accounts of the agrarian question and discusses how they might inform or limit understandings of the political ecology of food. We start with competing historical accounts of agrarian production in the works of Lenin, Kautsky and Chayanov. Next, we explore their respective influences in accounts of peasant studies and agrarian political economy in the 1970s and 1980s and the chasm existing between marxist and populist accounts of the peasantry and agrarian change. Finally, we trace the endurance and possible relevance of the agrarian question in contemporary readings of alternative agriculture, land-based social movements, renewed forms of enclosure and the financialization of land. Through this course we explore to what degree more recent studies of political ecology and food might be reinvigorated through a historically and geographically expansive reading of the agrarian question.

ENV1444H Capitalization of Nature

(S. Prudham)

This course will draw on a range of theoretical and empirical research materials in order to examine the particularities of what might be referred to as “capitalist nature”. Specifically, the course is concerned with three central questions: (i) what are the unique political, ecological, and geographical dynamics of environmental change propelled by capital accumulation and the dynamics of specifically capitalist forms of “commodification”? (ii) how and why is nature commodified in a capitalist political economy, and what are the associated problems and contradictions? (iii) how can we understand the main currents of policy and regulatory responses to these dynamics?

8.4.5 Urban and Economic Geography

JPG1501H The Political Economy of Cities

(K. Rankin)

The physical form of cities is an expression of social and economic processes that are nested and mediated at a number of different spatial scales. The reinvestment of inner city neighbourhoods is, for example, a simultaneous expression of global labour market restructuring, regional housing supply, and personal preference, among other factors. This course addresses the political and multi-scalar context of contemporary urban forms through a selective treatment of the relevant literature. It begins with a brief overview of conventional notions of urban structure, continues with more recent critiques of these ideas, and concludes with a focus on the impact of globalization.

JPG1502H Global Urbanism and Cities of the Global South

(R. Narayanareddy)

In this course we will critically examine “global urbanism” while paying explicit attention to how cities of global South have been studied, understood and depicted in global urban research. In the past two decades, influential policymakers have promulgated the “global cities” paradigm, which frames 21st century urbanism in global terms. According to the “global cities” paradigm “global” cities of the North, such as New York, London and Tokyo are at the pinnacle of globalization. In contrast, cities of the global

South are consistently portrayed as “mega” cities that are disorderly, polluted, chaotic, ungovernable, and marked by infrastructure collapse. In short, cities of the global South are mega cities with mega problems. In this course we will begin by examining policy-oriented as well as academic literature in order to understand how the global cities paradigm was given coherence and propagated across the world.

JPG1504H – Institutionalism and Cities: Space, Governance, Property & Power

(A. Sorensen)

This course focuses on the role of institutions in shaping processes of urban change, governance and planning. The premise of the course is that cities are extraordinarily densely institutionalized spaces, and that the formal study of institutions, and processes of institutional continuity and change will be productive for both planners and urban geographers. The course reviews the New Institutional literature in Political Science, Sociology, Economic Geography, and Planning Studies, with a focus on Historical Institutional concepts, and develops a conceptual framework for the application of institutionalist theory to urban space. The claim is that an understanding of institutions is revealing of power dynamics in urban governance, is valuable for understanding urban governance and planning in international comparative perspective, and provides a valuable perspective on urban property systems.

JPG1507H Housing Markets and Housing Policy Analysis

(L. Bourne)

The objective of this course is to provide an opportunity for in-depth analyses of housing, as both product and process, and to apply these analyses to concrete housing situations and current policy and planning problems. Two principal themes are emphasized: 1) assessments of changes in the structural and spatial dimensions of housing demand and supply, and alternative modes of housing provision; and 2) evaluations of housing policies and programs and their relationships to social and economic policies and urban planning. The latter will be undertaken primarily through the discussion of case studies of specific problems and policy issues, the former through a review of basic concepts on housing in the first few weeks of class.

JPG1508H Planning for the Urban Poor in Developing Countries

(A. Daniere)

This course covers public sector policies, programs and projects that target the urban poor in developing countries, particularly through attempts to improve their incomes through direct income-generating activities or employment and through the provision of basic environmental services. In addition the course examines planning for infrastructure services with an emphasis on the planning process.

JPG1509H Feminism, Postcoloniality and Development

(TBA)

This course takes up the challenge for feminist theory posed by the postcolonial condition, for the sake of articulating a critical theory of development (and geography/ planning more generally) that seriously engages issues of socio-cultural difference, including racism. By now ‘gender’ has been thoroughly accepted as a legitimate domain of intervention in mainstream development circles, and we will briefly consider how liberal, Marxist and post-colonial feminisms have contributed to its institutionalization. But we will also view these developments critically, asking how they might be implicated in wider-scale political economic processes such as imperialism, neoliberalization and associated patterns of socioeconomic and cultural injustice. To do so requires theorizing the postcolonial condition, with recourse not only to postcolonial theory but also to more materialist engagements with cultural politics and political economy. We conclude by exploring how we might build on this analysis to claim development (and planning/geography) as a feminist practice.

JPG1510H Recent Debates on Urban Form

(A. Sorensen)

This course reviews three significant bodies of literature on the topic of urban growth and how to structure it, those of Growth Management, New Urbanism, and Sustainable City Form. Each offers a critique of recent patterns of urbanisation, and proposes an alternate pattern of development, yet the problems identified and the approaches suggested vary widely. Participants will be encouraged to explore these differences.

JPG1512H Place, Politics and the Urban

(A. Walks)

The course examines the relationship between geography, politics, and governance. In particular, it seeks to interrogate the theoretical importance of place, space and urban form in the production of political and social values, practices, strategies, and discourses, and in turn, analyze the implications of the place-politics nexus for understanding shifts in the direction and form of urban policy, governance and citizenship. The course begins with a broad examination of the theoretical bases for linking place and politics, particularly as this relates to the construction of urban and non-urban places, with literature drawn from a number of sources, including geography, urban studies, political science, and planning theory. The course then examines a number of specific cases, from gentrification as a political practice, to the politics of homelessness and anti-panhandling legislation, and the political geography of regional planning and municipal amalgamation, that inform and challenge our understanding of the relationship between place and political praxis.

JPG1516H Declining Cities

(J. Hackworth)

Much of planning and urban thought more generally is implicitly or explicitly oriented around the idea of growth—growth allows cities to be managerial, gives them room for error, salves intra-constituency squabbles, etc. In the face of decline, the most common planning or urban theoretical response is to engage in economic development (that is, to reignite growth). But what about those cities (or sections of otherwise growing cities) that have declined in population or resources and remained healthy, pleasant, places to live? Can we learn something from their experience that allows us to rethink the way that cities decline, or what the professional response to it should be? What about those cities, conversely which retain an infrastructure footprint that was intended for a much larger city? Can they be downsized in a planned way? If so, what would such an effort (mobilizing the state to sponsor planned decline) mean for the bulk of urban theory that suggests that it is the state's role to reignite growth?

JPG1518H Sustainability and Urban Communities

(S. Bunce)

This course focuses on sustainability and communities and neighbourhoods in cities in North America and Europe, with some exploration of examples of community-based sustainability in cities in the global south. The intention of this course is to examine academic and policy discussion on urban sustainability and the contemporary context and future of urban communities, and will address socio-political dimensions of urban sustainability found in human geography and urban planning literatures, rather than focusing on physical or technical applications of sustainability principles.

JPG1554H Transportation and Urban Form

(S. Farber)

The need to reduce automobile dependence and congestion has been argued widely in recent years, and urban form has been identified as a major aspect influencing choice of travel mode. The combined imperatives of sustainability, healthier cities, and worsening congestion has prompted an increasingly rich body of research on the relationships between urban form, transport infrastructure, and travel patterns,

and an array of new methodological approaches to research them. This course critically examines this research and examines planning strategies that seek to influence travel through coordinated transport investment and land use and design control. Both regional and neighbourhood scale issues and strategies will be addressed. The geographic focus of the course will largely be metropolitan regions in Canada and the United States, but there will be opportunity to examine other national contexts.

JPG1556H Transportation Systems Analysis: An Exploration of Concepts, Methods, Applications and Emerging Issues

(R. Buliung)

Transportation systems play an integral role in supporting a range of daily activities at various scales (e.g., neighbourhood activities to global trade). Moreover, interaction between system users typically gives rise to externality effects ranging from increasing the attractiveness of places, to congestion and environmental emissions. Through this course students will explore established and state-of-the-art approaches to the analysis and management of transportation systems. The course begins with a look into the Urban Transportation Planning System (UTPS), with a view to understanding both its current role in transportation planning and potential shortcomings. Attention then shifts toward current thinking and cutting-edge research directed at understanding and modeling microscopic (e.g., individual, household) demand for activities and travel. While the broader urban activity system includes numerous stakeholders and subsystems (transport, land use, etc.), the course stresses conceptual, methodological and emerging issues related to personal mobility and accessibility. Emphasis is uniquely placed on the spatial and temporal properties of urban transportation systems.

JPG1558H Transportation: Historical and Geographical Perspectives

(R. Buliung)

Transportation of goods, people, and information is an integral aspect of everyday life, but what of the origin of the various modes of transportation? How did the systems that we use and plan today, and their constituent technologies come to be? Annually, this course will involve an exploration of the history and geography of a particular mode of transportation. Using lectures, seminars, student papers and presentations, and occasionally fieldwork, the key people and places, technologies associated with the development of the modes of transport will be examined. The ebb and flow of demand for the modes of transport (e.g., biking, walking, public transit, the car) through time and across space will be discussed, as will costs and benefits. Adopting an historical and geographical lens, we will also consider the uneven way in which transport modes seem to fall into and out of favour, locally, nationally, and globally.

JPG1607H Geography of Competition

(J. Miron)

In a market economy, how do firms come to be at the places where they produce, distribute, or sell their goods or services? How, when, and why does competition among firms as well as the impact of firm siting on the siting of their suppliers and customers, lead to localization (clustering) of firms in geographic space, the growth of some places (e.g., some cities or districts), and the decline of others? Such questions are central to an area of scholarship known as competitive location theory. A spatial (regional) economy incorporates "shipping costs" which include costs related to search, freight, insurance and brokerage, storage, installation and removal, warranty and service, and arbitrage profit. As a result, the effective or delivered price of a firm's products or inputs, inclusive of shipping costs, may well vary locally. This course focuses on how, as a result of competition, location and clustering shape and are shaped by local prices.

JGE1609H Cities, Industry, and the Environment

(P. Desrochers)

This reading seminar is devoted to the study of the environmental impacts of urban industrialization and to past, current and potentially new and better ways of addressing them. Several topics, from the creation

of recycling linkages between firms to brownfield redevelopment, are examined through the theoretical lenses of eco-industrial development, a perspective that looks at industrial production using an analogy to ecological systems where the by-products of one species become the food of another. In view of the importance of existing and proposed environmental regulations for the adoption of potentially more sustainable industrial practices, a portion of this course will be devoted to the analysis of how various regulatory regimes have affected firms' behaviour towards the environment. North American regulations, policies and practices will provide the background for discussing past successes and mistakes.

GGR1610H Geography of Finance and Financial Crisis

(A. Walks)

The rupture in the global economy following the collapse of Lehman Brothers in the United States brought to mainstream attention the important role played by finance, as well as the vulnerable ways that the global economy is linked together through financial instruments. This course seeks to understand the world of financial flows, intermediaries, and instruments, and how these may be related to the uneven geography of mortgage foreclosures, real estate inflation and deflation, bank bailouts, and government austerity programs. It explores how this geography of finance might be related to the production of financial crises, and how the global geography of international finance relates to the public finances of nations and municipalities, pension and hedge funds, and individual investors. The course begins by exploring the workings of international finance, and the literature on the geography of financialization and the globalization of finance. It then moves to examine the history and geography of financial crises, including both the current crisis and the great depression, to consider the different theories of financial crisis emanating from disparate political-economic-geographical perspectives, as well as the divergent policy implications that flow from such theories. The course then explores the literature regarding the localized effects of the geography of finance, from the cultural politics of homeownership, to the geography of sub-prime lending and foreclosures, deepening unemployment in European cities, and the geography of credit card debt, bankruptcies and defaults.

JPG1614H Regional Development and Policy

(M. Gertler)

The process by which regional economies develop and change serves as the focus for this course. Emphasis is on the changing nature of capitalist economies; implications for regional systems of production and consumption, and; regional development policy. Examples are drawn from Canada, the United States, Great Britain and Western Europe.

JPG1615H Planning the Social Economy

(K. Rankin)

What would it take to build a 'social economy,' an economy rooted in the principles of social justice, democratic governance and local self-reliance? What are the progressive and regressive implications of such an undertaking? JPG 1615 will explore these questions both theoretically and practically. Theoretically, with recourse to some canonical and more recent writings about the interface between 'society' and 'economy'. Practically, the course will look at what role municipal governments could and do play in building the social economy. The case of social housing in the GTA serves as an example—as well as a context for learning about key tools in local economic development. The course will also consider how communities and neighbourhoods are growing increasingly active in developing alternative economic institutions, such as cooperatives, participatory budgets and community development financial institutions in order to institutionalize the social economy at the local scale.

JPG1616H The Cultural Economy

(D. Leslie)

This course examines the so-called "cultural turn" in economic geography, often referred to as "the new economic geography". We will begin by considering various ways of theorizing the relationship between

culture and economy. After reflecting upon the historical antecedents of contemporary understandings of this relationship, we will explore selected themes in the cultural economy literature such as cultural industries, consumption, economic discourse, work cultures, governmentality and commodity chains/actor networks.

GGR1620H Institutional and Evolutionary Economic Geography

(J. Zhang)

Both institutional and evolutionary perspectives have recently exerted enormous influence in economic geography, generating an explosion of research programs and publications. However, the literature remains highly fragmented, and there is still much ambiguity as to what it means to say that economic geography is institutional or evolutionary. Furthermore, evolutionary economic geography is yet to be made compatible with institutional and political perspectives, so that a multi-layered and multi-scalar evolutionary process can be conceptualized. This graduate seminar examines the frontier of the interdisciplinary literature on institutions and economic evolution. It is designed to develop a close dialogue between institutional and evolutionary economic geography, as well as between economic geography and other heterodox economics. It seeks to help students develop a critical angle to the existing literature, and a clear conceptualization of institutions and evolution from a geographic perspective.

JPG1660H Regional Dynamics

(R. DiFrancesco)

The space-economy has always been characterized by polarization across myriad dimensions. As a result, regional economic change has been very difficult to fully explain (and certainly predict) using conventional (orthodox) theories and methods. This course examines the theoretical linkage between related trends in terms of globalization, vertical disintegration, specialization, innovation, and the locational behaviour of firms. We will focus on the seemingly counter-intuitive finding that regional economic change in a time of increasing global interdependence is increasingly dependent on the local context. Topics will include evolutionary economic geography, path dependence, economic clusters, learning regions, the role of institutions, knowledge spill-overs, and the geography of innovation, among others. We will see why the economic activity is becoming ever more concentrated in space even as it globalizes. Exclusion: GGR431.

JPG1670H Regional Economic Analysis

(R. DiFrancesco)

A lecture/seminar course designed to provide geographers and planners alike with a thorough understanding of the theory and methods of Regional Economic Analysis. Although much of the lecture/seminar time will be used to discuss the various techniques and their theoretical underpinnings, students will be evaluated entirely on their ability to conduct a study of some urban/regional economic problem using techniques covered in class. A significant amount of time will be committed to guiding students through the design and implementation phases of their projects. The use of widely available spreadsheet packages for these analyses will be stressed. Topics to be covered will range from economic base models, through various types of input-output models to regional econometric models.

JPG1812Y Planning for Change

(A. Kramer, R. DiFrancesco)

Planning for Change is a year-long course (Y) comprised of seminars, readings, films, discussion, writing, reflection and the completion of a major project designed by and for a community organization. Students will have the opportunity to gain an in-depth, reflective experience in the field of community development. The course is based on successful models of service-learning courses at other institutions. Service learning, as a pedagogical practice, aims to unite what often appear to be divisive realms of theory and practice by providing analytical tools to connect academic and community development work. Service-

learning aims to create an educational space where work is done for community organizations with students based on the self-identified needs of the community. Students are challenged to reflect on the work they are doing and the context in which service is provided. Planning/Geography education and service-learning are in many ways an ideal partnership. A service-learning course in the graduate program at the University of Toronto opens a way for students to gain hands-on experience in the field of community development.

***POL2338H Innovation and Governance**

(H. Bathelt)

The course discusses a broad range of topics related to innovation and governance, such as (i) technological change and its social and economic consequences, (ii) the spatial effects which result from this, and (iii) the necessities for economic policies at different territorial levels. As the international competitiveness of industrial economies cannot be based on cost advantages alone, future growth in the knowledge-based economy will be increasingly associated with capabilities related to knowledge generation and innovation. As a consequence, questions of performance in innovation and policy support will become decisive at the firm, regional-state and national-state levels.

The seminar is divided into four main parts: The first part deals with conceptual foundations of innovation processes, such as evolutionary and institutional views of innovation. In the second part, national configurations of innovation processes and governance are investigated. The third part will deal with innovation processes at the subnational level, focusing on regional innovation and a knowledge-based conception of clustering. The final part of the course discusses aspects of multilevel governance in regional and global context. The seminar develops a relational perspective of institution-building and territorial governance which helps us to understand cross-national innovation processes.

This course is inter-disciplinary in nature and uses literature from a number of different fields dealing with innovation, governance and its consequences in economic and social life. The course should, thus, also be of interest to students in Economics, Geography, International Relations, the History and Philosophy of Science and Technology, and Sociology.

8.4.6 Cultural/Historical/Social Geography

JPG1503H Space, Time, Revolution

(K. Goonewardena)

This graduate seminar examines the relations between critical spatio-temporal and socio-spatial thought and new conceptions of radical politics. Its references are twofold: on the one hand, it surveys the recent attempts of such thinkers as Alain Badiou, Slavoj Žižek, Daniel Bensaïd, Jacques Rancière, Giorgio Agamben, Bruno Bosteels and Peter Hallward to re-theorize revolution in the face of global liberaldemocratic hegemony; on the other hand, it interrogates their conceptions of 'event', 'situation', 'dissensus', 'exception' and 'communism' in the historical court of actual revolutionary experiences produced by anti-colonial and socialist politics, especially at such moments as 1789, 1791-1803, 1848, 1871, 1917, 1949, 1968. The readings for this course will therefore draw on both contemporary theoretical texts and classic accounts of revolutionary subjectivity that highlight its spatio-temporal and socio-spatial dimensions, in the vein of Kristin Ross's *The Emergence of Social Space: Rimbaud and the Paris Commune* as much as Frantz Fanon's *The Wretched of the Earth*.

JPG1505H The Multicultural City: Diversity, Policy and Planning

(M. Mahtani)

As communities across Canada become even more culturally diverse, those of us involved in shaping planning and social policy require an ever-expanding toolbox of skills and approaches for policy to be truly inclusive. How can urban social policy respond to the new realities of transnational migration? How

can planning practices respond to the challenges of difference in the city? This course will explore these questions by focusing on innovative processes that are required to work in policy arenas through a multicultural context.

JPG1506H State/Space/Difference: Understanding the New Social Geography of the State

(S. Ruddick)

This course focuses on the new social geography of the state and social policy. A new “geography” of the state is emerging with the downloading of services to sub-national levels of government and the rise in importance of supranational institutions. This has raised questions about the hollowing out of the nation state and the real and imagined impacts of “globalization” on the politics of redistribution. A new “social geography” of the state is emerging as the “rescaling” of social policy brings with it increasing uncertainty about normative basis for policies of redistribution— as institutions contend with economic, cultural and political differences across (and within) national borders. The course focuses on approaches within political economy, with particular emphasis on the regulation school. Examples are primarily Western, with emphasis on Europe, the European Union and North America.

JPG1520H Contested Geographies of Class Formation

(M. Hunter)

How are spatial and class inequalities produced and contested in mutually constituted ways? Why are class inequalities always spatial inequalities? Following criticisms of Marxism and feminism in the 1980s (tied up with what some call the “cultural turn”) scholars have become accustomed to view race, class, gender, and sexuality as “intersecting.” This is an important development—a starting point in fact for the course—but it has also left a situation whereby we routinely evoke class to explain the social world in which we live but often in a way that lacks a sense of the term’s genealogy and analytical strengths and limitations. This course therefore excavates writings on class from sociologists like Marx, Weber, and Bourdieu; geographers like Cindi Katz and Doreen Massey; intersection scholars like Patricia Hill Collins; urbanists like David Harvey; and writers on colonialism like Franz Fanon. We divide the seminar into two parts: the first explores key theories on class and the second explores these through monographs.

JPG1672H Land and Justice

(T. Kepe)

Land carries a heavy weight of historical meaning. It has two broad meanings: the landscape valued for its natural resources (e.g. food production, raw material, living space etc) and the territory with which a particular people identify. These meanings of land have implications on why anyone has interest in particular land, and how it is held and distributed. Similarly, how land was acquired and by whom, as well as how it is currently used, can determine its multiple meanings to different people and governments. There is extensive evidence that indicates injustice was central in many of the processes followed to acquire land in many nations, and that the way it is currently held or used, or redistributed remain unjust. This course focuses on justifications normally given for historical land injustices (including colonial land dispossession and other forms of land grabs), as well as an assessment of current strategies to deal with land injustices that are adopted by different nations. This is a reading-intensive course. The contact session takes the form of a class discussion based on the prescribed readings, with the instructor acting as a facilitator, including making short introductory and concluding remarks. Each student is required to lead at least one or two discussion sessions. It is required that the readings for each session be done prior to coming to class.

JPG1702H Historical Urban Geography and Planning

(R. Lewis)

The focus of this course is the process of North American urban restructuring between 1850 and 1960. It is a seminar course which covers a range of economic, political and social issues such as industrial

reorganization, the changing role of the state and planning, and the construction of class and ethnic neighbourhoods.

GGR1705H Historical Geographies of Modernity

(M. Farish)

Building on critical assessments of the idea and influence of modernity, historical geographers have recently reconsidered subjects such as power and identity, human-environment relationships, and the genealogy of geographical thought. This course will treat modernity not just as a historical condition, but as a geographical project. Broad texts on modernity and its spatial dimensions will be read and discussed alongside a geographically diverse set of site-specific studies. Themes to be used for orientation include violence and anti-violence; science and empire; and cultures of modern urbanism.

GGR1706H Geographies of Religion and Secularism

(J. Han)

Geography of religion has the potential to interpret and examine not only the places of worship, but also the spatial dynamics of religious practices and institutions. The Christian church, for example, has always meant both the building and the institution, and the very word, “congregation,” quite obviously denotes spatial gathering. This course will train students to cast a wide intellectual net, examine the bounty of interdisciplinary—and interconnected—scholarship on contemporary religion, and develop their own approaches as feminist, cultural, and political geographers. Diverse and wide-ranging readings will include Talal Asad, Charles Taylor, Yi-Fu Tuan, Saba Mahmood, Judith Butler, Sara Ahmed, Rick Warren, and Marjane Satrapi. Particular attention will be paid to research design and methodological considerations.

JPG1706H Geographies of Violence and Security

(D. Cowen)

This course explores the shifting spatiality of organized violence, as well as changing theories of war and in/security. From the historical nationalization of legitimate war as a project of ‘internal’ and ‘external’ colonialism, to the disciplining of labouring bodies as part of the rise of geo- and bio-political forms, to the contemporary securitization of everyday urban life and the blurring of the borders of military and civilian, war and peace, and ‘inside’ and ‘outside’ state space, this seminar tracks the geographies of the political through the logistics of collective conflict. The course will examine perpetual, urban, and privatized forms of war that trespass modern legal, political, ontological, and geographical borders. Finally, we will explore problems of war ‘at home’. How does the practice of war within the nation and the productive nature of war for domestic politics trouble our assumptions about the nation state, citizenship and ‘normal’ political space and time?

GGR1707H Situating Identities: Geography and Autobiography

(M. Mahtani)

What is the place of autobiography in geography? How is the subject reconceptualized and mapped autobiographically in geography? This course will explore the myriad ways that autobiography can be employed to chronicle the development of geography as a discipline. Tracing the epistemological histories of geographic thought through an autobiographical analysis of the work of key geographical theorists, this course will focus on juxtaposing critical autobiographical work against theoretical contributions, towards understanding how geographers have come to recognize the need to place themselves critically in the research process and the construction of geographical knowledge. Weekly course topics will include, but not be limited to: subjectivity, experience, postcolonial critiques of reflexivity and positionality, Indigenous autobiography, portraiture, and autopraxiology.

GGR1714H Geographies of Citizenship

(E. Gilbert)

The cultural turn that has seeped through the humanities and social sciences in the last several decades has had widespread effects: it has disabled older theories, epistemologies, methodologies, and even the organization of institutional disciplines. This course will critically examine the dimensions of this cultural turn in terms of the contemporary transformations to the study of cultural geography, and specifically the ways that our understanding of landscapes has been reconfigured. Cultural theories will be read up and against recent geographical writings. This strategy will also enable us to engage in a broader discussion of the role and uses of theory, of methodological forms and practices, of the dissemination and trajectory of ideas, and finally, of the politics of writing, research and the production of knowledge.

JPG1802 Political Spaces I

(TBA)

The starting point for this course is that space is produced at multiple scales through contested power relations. Our examination of political space thus engages bodies, identity and subjectivity as sites for exploring the socio-spatial ordering of difference, racialization, gender, sexuality and class. The ways in which these processes articulate the ideologies, practices and technologies of governance and citizenship are also crucial to the formation of political space and a key focus of this course. Building an interpretation of political space involves engaging questions of borders, thus security, mobility, transnationalism, and critical/geopolitics must also be critically examined. Other related domains of political space addressed in the course include: neo-liberalism and the social construction of markets; nature, land and land rights; and post-coloniality, modernity, modernization.

JPG 1804H Space, Power and Geography: Understanding Spatiality

(S. Ruddick)

The course charts new ways of thinking about space and power that are non-Cartesian, non-Hobbesian, and non-representational originating in divisions in Enlightenment thinking 400 years ago. Contemporary manifestations of this shift can be seen in the work of Foucault and Deleuze, Hardt and Negri, Bruno Latour their growing influence in geography manifest in geo-philosophy, non-representational space, emotional geographies, geographies of affect, politics of the multitude, networks and assemblages. The course explores the conceptual developments that give rise to this shift, introducing students to new ways of thinking about the nature of power, the nature of resistance, forms of social organization and mobilization, and the organization of space itself.

JPG1805H Transnationalism, Diaspora and Gender

(R. Silvey)

This seminar focuses on the politics of contemporary global migration processes with particular attention to the gender dimensions. It examines the geographic literature on transnationalism and diaspora to develop insight into the theoretical ramifications of critical political-economy, post-colonialism, post-structuralism, and feminism.

GGR1806H Feminist Geographies

(M. Mahtani)

This course will examine feminist challenges to human geography since the 1970s, paying particular attention to the way women's voices have been marginalized through our critical examination of the social landscape. Focusing on the relationship between multiple scales of the body, the urban, the community and the global, we will explore the construction and representation of gendered and racialized identities with particular emphasis on the relationship between critical race scholarship, anti-colonialism and feminist geographical interventions.

JPG1809H Spaces of Work: Value, Identity, Agency, Justice

(M. Buckley)

This course will introduce students to Marxist, feminist, anticolonial and intersectional perspectives on 'work' in the twenty-first century. A key intention of this course is to prompt students to examine what forms of work – and also whose work – has been taken into account in geographical scholarship and to explore a number of prominent debates concerning labour, work and employment within geography over the last three decades. In doing so we will engage with foundational political economy texts on the relations of labour under capitalism, and texts within geography and sociology on work, labour, place and space. We will also examine a number of broad economic and cultural shifts in the nature of contemporary work and employment such as de-industrialization, the feminization of labour markets and service sector work, neoliberalization and the rise of the 'precariat'. At the same time, students will be prompted to consider critiques of some of these 'transformational' narratives to probe the colonial, patriarchal, and capitalist continuities shaping the contours of contemporary work. In this sense this is not an exhaustive course on labour and work in geography, but rather a series of discrete introductions to key scholarly arguments about work, often followed by a range of responses to those arguments in the following week. The course will touch on a broad range of topics, including unfree labour, labour organizing, precarious employment and social reproductive work which are tied together by four overarching themes that run through the course – value, identity, agency and justice. Overall this course aims to give students the chance to explore not only how work has been conceptualized and studied in geography, but how it could be.

GGR1811H Troubling Militarism: Space, Affect, Economy

(D. Cowen/J. Han)

In this course we examine the spatial politics and affective economies of militarism. Our approach is feminist, queer, and geographical, and combines questions of geopolitical and geoeconomic inquiry. Rather than approach "militarism" as a coherent set of ideas and practices that must simply be opposed, resisted, or reversed somehow, we seek to trouble militarism and its affective mobilization. We will grapple with the violence of militarism, not only in the immediately martial practices that the term typically denotes, but also in the imperial and colonial political geographies out of which the modern use of the term arises, and through its everyday and banal attachments. The ultimate aim is to develop conceptual and theoretical tools to explain militarism, militarization, and militancy through a critical engagement with ideas of race, class, gender, identity, and difference. What are the historical connections between the practice of nationalism and imperialism and the rise of militarism? What are the economic and political factors tied to militarism throughout the world? How do the concepts of militarism, militarization, and militancy help us to rethink the geo-political economies of labour, war, and violence? How can we broaden statist approaches to militarism to draw critically from scholarly, journalistic, and creative engagements with social movements and resistance strategies? Can we extend our analysis to envisage a more expansive set of questions concerning militarism to include sexual politics, queer militancy, and martyrdom? When / does militancy exceed the militarism that help shape its form? Throughout the semester, we will fine-tune our concepts and terminology to build a robust set of tools to trouble militarism, militarization, and militancy across time and space.

JPG1815H Political Economy, the Body, and Health

(M. Hunter)

What are the health consequences of recent transformations in sexuality and intimate relationships? How are intimate geographies of disease spatialized? This course explores connections between intimacy, geography, and health particularly through the lens of sexually transmitted infections. The course takes as its starting point the recent turn from medical geography towards a more qualitative, theoretically driven, health geography. It draws from research in countries that include Papua New Guinea, the Dominican Republic, and South Africa.

8.4.7 Spatial Information Systems

JPG1906H Geographic Information Systems

(D. Boyes)

This course provides an intensive introduction to fundamental geographic information system (GIS) theory, as well as practical, hands-on experience with state-of-the-art software. The course is designed to accommodate students from a variety of research backgrounds, and with no previous GIS experience. The goal is to provide students with a theoretical understanding of spatial data and analysis concepts, and to introduce the practical tools needed to create and manage spatial data, perform spatial analysis, and communicate results including (but not limited to) the form of a well-designed map. Assignments require the use of the ArcInfo version of ESRI's ArcGIS software and extensions, and are designed to encourage proper research design, independent analysis, and problem solving. By the end of the course, successful students should be able to apply what they have learned to their own research, to learn new functions on their own, and have the necessary preparation to continue in more advanced GIS courses should they wish to do so. Classes consist of a two hour lecture each week, which integrate live software demonstrations to illustrate the linkages between theory and practice.

GGR1911H Remote Sensing

(J. Chen)

Advanced image processing, theory and applications of spatial resolution effects on classification, monitoring and interpretation of landscapes. From field spectrometric data to simulated images. Exclusion: GGR337.

GGR1912 Advanced Remote Sensing

(Y. He)

TBA

JPG1914H GIS Research Project

(D. Boyes)

Students will work in a group setting to explore the application of GIS techniques to a problem that crosses the boundaries of economic geography, physical geography, and planning. Students should discuss their backgrounds with the instructors before registering for the course.

GGR1921H Open GIS Processing

(V. Robinson)

Surveys issues in the development and practice of open source geospatial software as well as open access data. Students will be introduced to major free and open source software used to process geospatial information. Through hands-on projects, students will be introduced to script writing to address complex geographical information processing tasks.

GGR1922H Topics in Geographical Information Science

(V. Robinson)

This course provides an overview and introduction to the concepts, theory and application of Geographical Information Science (GISci). The course provides an opportunity for students to pursue a specific topic in-depth.

9 Policies and Guidelines

9.1 General

There are numerous policies and guidelines affecting graduate studies. These appear on the SGS Web site at

<http://www.sgs.utoronto.ca/currentstudents/Pages/Policies-Guidelines-Student-Responsibilities.aspx>

- Graduate Grading Policy
- Intellectual Property
- Research Ethics
- Academic Sanctions for Students With Outstanding Obligations to the University
- Code of Behaviour on Academic Matters
- Sexual Harassment
- Code of Student Conduct
- Access to Student Academic Records
- Safety in Field Research
- Appropriate Use of Information and Communication Technology
- Statement on Human Rights

Furthermore, University of Toronto-wide policies affecting students are available at www.governingcouncil.utoronto.ca/policies.htm.

9.2 Ethics Review

The University of Toronto requires that all graduate student and faculty research involving human subjects be reviewed and approved by the relevant institutional Research Ethics Boards (REBs) before work can begin. Although research methodologies differ, the fundamental ethical issues and principles in research involving human subjects are common across all disciplines.

Research involving human subjects includes:

- Obtaining data about a living individual through intervention or interaction with the individual, or the obtaining of private personal information about the individual.
- Secondary use of data (i.e. information collected for purposes other than the proposed research) that contains identifying information about a living individual, or data linkage through which living individuals may become identifiable.
- Naturalistic observation, except the observation of individuals in contexts in which it can be expected that the participants are seeking public visibility.

The University of Toronto has five Research Ethics Boards (REBs) that meet monthly to review ethical protocols from faculty members and graduate students of the departments that they serve. The Office of Research Ethics is part of the Office of the Vice-President, Research and Associate Provost, and functions to assist researchers through the ethical review process and to provide administrative support to the Research Ethics Boards (REBs). The REB that covers Geography research is the Social Sciences and Humanities Ethics Review Committee.

It is mandatory that all projects involving human subjects receive ethical approval **before** commencing any research activities, including recruitment, pre-screening or pilot trials. The ethical process for each protocol is slightly different (dependent on ethical issues inherent to research methodology, subject

population, research question, etc.) and may take several weeks to months for final approval. Clarification and revisions to original submissions are common, and are handled as quickly and efficiently as possible. Understanding the issues and receiving proper guidance and supervision in the crafting of both the research study and the ethical protocol can minimize turn-around time.

The SGS Student Guide on Ethical Conduct, Research Involving Human Subjects is available at <http://www.sgs.utoronto.ca/facultyandstaff/Pages/Research-Involving-Human-Subjects.aspx> and provides an overview of the policy and requirements.

Detailed research ethics policies, application forms, and all the information and resource materials needed to submit an ethics protocol for review are available at <http://www.research.utoronto.ca/>.

9.3 Plagiarism and Other Academic Offences

Students in graduate studies are expected to commit to the highest standards of integrity and to understand the importance of protecting and acknowledging intellectual property. It is assumed that they bring to their graduate studies a clear understanding of how to cite references appropriately, thereby avoiding plagiarism. The student's thinking must be understood as distinct from the sources upon which the student is referring. Two excellent documents entitled *How Not to Plagiarize* and *Deterring Plagiarism* (of interest to students and faculty respectively) are available for reference on the SGS website or from the department.

The University's understanding of plagiarism is found in the Code of Behaviour on Academic Matters (available on the Governing Council website) and includes the following statements:

It shall be an offence for a student knowingly:

(d) to represent as one's own 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.

Wherever in the 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.

Other academic offences include the possession and/or use of unauthorized aids in examinations, submitting the same paper for different courses, to name only a few of the most obvious violations. Please refer to the Code of Behaviour on Academic Matters for detailed descriptions of offences and procedures.

Violations of the Code of Behaviour on Academic Matters by graduate students are taken very seriously. Following procedures outlined in the Code, cases involving graduate students are handled by the Chair of the Graduate Department and the Dean of the School of Graduate Studies. Students are encouraged to inquire of their departments about specific practices in their discipline related to appropriate citation practices. It is the responsibility of the student to be informed and to "cite it right".

9.4 Travel Abroad

The Safety Abroad Office (SAO) is a service available to UofT students who travel abroad for a University activity. They partner with students, staff and faculty to minimize risk by:

- Providing Safety Abroad Workshops
- Monitoring security situations
- Assisting students with emergencies abroad
- Offering 24/hr Emergency line

Students involved in a “UofT activity” (in other words if they are getting credit, funding or sanctioning from the University) will have to register with the Safety Abroad Office before any travel.

All students must complete the following items at least one month before travel:

1. Completion of Safety Abroad Workshop
2. Registration with the Safety Abroad Database
3. Submission of Travel Waivers
4. Obtain Supplementary Health Insurance

There are two different pathways for students to take to register with the Safety Abroad Office, depending on the nature of travel and how it is being processed by the University.

A trip is considered,

Department Travel if: The student is taking a trip that is organized by the student and at a time that independent from conventional semester dates (ex. Conference or independent research). Steps to be taken are:

1. Fill in Online Registration Request form
2. The SAO will register you and send you a confirmation email, you can then sign on to the Safety Abroad Database and fill in your profile completing Emergency Contact, Passport and Travel Health insurance information
3. Attend Safety Abroad Workshop (valid for 1.5 years)
4. Sign and submit waivers to the Safety Abroad Office
5. Get Supplementary Health Insurance

Program Travel if: 1) Someone from UofT is choosing participants and/or helping organize part of the the travel; 2) if ythe student is taking a trip as a group or field trip (ex. Exchange, internships or practicums). Steps to be taken are:

1. Sign in to the Safety Abroad Database and input Emergency Contact, Passport and Travel Health insurance information
2. Attend a Safety Abroad Workshop (valid for 1.5 years)
3. Sign & submit waivers to your program
4. Get Supplementary Health Insurance

Visit the Safety Abroad website at <http://www.studentlife.utoronto.ca/cie/safety-abroad> for further information.

9.5 Official Correspondence

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

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

The University provides centrally-supported technical services and the infrastructure to make electronic mail and/or on-line communications systems available to students. University correspondence delivered by electronic mail is subject to the same public information, privacy and records retention requirements and policies as are other university correspondence and student records.

Students are responsible for maintaining and recording in the Student Web Service a current and valid postal address as well as the address for a University-issued electronic mail account. Students are expected to monitor and retrieve their mail, including electronic messaging account(s) issued to them by the University, on a frequent and consistent basis. Students have the responsibility to recognize that certain communications may be time-critical. Students have the right to forward their University-issued electronic mail account to another electronic mail service provider address but remain responsible for ensuring that all University electronic message communication sent to the official University-issued account is received and read. Failure to do so may result in a student missing information and will not be considered an acceptable rationale for failing to receive official correspondence from the University.