

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.

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GRADUATE STUDENT HANDBOOK 2012-2013

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1 Academic Calendar

Fall 2012

August 6	Civic Holiday (University closed)
August 13	Registration for Fall session begins
August 31	Last date for payment of tuition fees to meet registration deadline
September 3	Labour Day (University closed)
September 4-9	Orientation Week Activities
September 10	Most formal graduate courses and seminars begin
September 14	Registration for Fall session ends; after this date a late registration fee will be assessed
September 17	Final date to submit PhD theses to SGS to avoid fees for 2012-2013
September 24	Final date to add full-year and Fall session courses
September 26	Summer session grades available for viewing on Student Web Service
October 5	Final date for receipt of degree recommendations and submission of any required theses for master's degrees for Fall Convocation without fees being charged for the Fall session
October 5	Final date to submit final PhD theses for Fall Convocation
October 8	Thanksgiving Day (University closed)
October 29	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 24	University closed for winter break

Winter 2013

January 7	University reopens
January 7	Most formal graduate courses and seminars begin
January 11	Final date for registration for students beginning program in Winter session
January 15	Final date to submit PhD theses without fee payment for Winter session
January 16	Fall session grades available for viewing on the Student Web Service
January 21	Final date to add Winter session courses
January 25	Final date for receipt of degree recommendations and submission of any required theses for master's degrees for March or June Convocation without being charged fees for the Winter session
January 25	Final date for all students to request that their degrees be conferred in absentia in March
January 25	September dual registrants must be recommended for the master's degree by this date to maintain their PhD registration

February 18	Family Day (University closed)
February 25	Final date to drop Winter session half or full courses without academic penalty
March	March graduation in absentia – Information is posted at www.convocation.utoronto.ca
March 29	Good Friday (University closed)
April 19	Students recommended for convocation in June - Coursework must be completed and grades must be submitted for full-year and Winter session courses
April 19	Final date for receipt of degree recommendations and submission of any required theses for master's degrees for June Convocation
April 19	Final date for submission of final PhD theses for June Convocation
May 3	Final date for registration for students beginning program in Summer session
May 10	Final date to enrol in May-June or May-August session courses
May 15	Full-year and Winter session grades available for viewing on the Student Web Service
May 20	Victoria Day (University closed)
May 31	Final date to drop May/June courses without academic penalty
June	Spring Convocation - Information is posted at www.convocation.utoronto.ca
June 21	Final date to drop May-August courses without academic penalty
June 28	Final date to enrol in July-August courses
July 1	Canada Day (University closed)
July 19	Final date to drop July-August courses without academic penalty
July 24	Grades for May-June courses available for viewing on the Student Web Service

2 Faculty Directory

<p>Christian Abizaid (416) 978-3373 christian.abizaid@utoronto.ca Room SS5025B (STG)</p>	<p>Peasant livelihood, human responses to environmental change, human-induced environmental change, land use and land cover change, environment and development, neotropical forests, Latin America (in particular the Amazon and Mexico)</p>
<p>George Arhonditsis (416) 208-4858 georgea@utsc.utoronto.ca Room SW410A (UTSC)</p>	<p>Aquatic biogeochemical modelling; aquatic ecosystem responses to climatic variability; plankton ecology/food web dynamics; watershed-aquatic ecosystem interactions</p>
<p>Nathan Basiliko (905) 569-4515 nathan.basiliko@utoronto.ca Room SB3102 (UTM)</p>	<p>Biogeochemistry and microbial ecology of northern forest and wetland ecosystems; soil science; global and environmental change; natural resource management and ecosystem restoration</p>
<p>Harald Bathelt harald.bathelt@utoronto.ca</p>	<p>Industrial and economic geography; political economy and methodology</p>
<p>Alana Boland (416) 978-1587 boland@geog.utoronto.ca Room SS5006 (STG)</p>	<p>Environment and development; political geography; China</p>
<p>Donald Boyes (416) 978-1585 don.boyes@utoronto.ca Room SS5011 (STG)</p>	<p>Geographic information systems (GIS) and science; technology and pedagogy; urban forestry; remote sensing; northern environments; GIS project management, implementation; use of GIS in northern and aboriginal organizations</p>
<p>Ron Buliung (905) 569-4419 ron.buliung@utoronto.ca SB3104 (UTM)</p>	<p>Transportation geography; interaction and feedback between transport, land use and environmental systems; activity-travel analysis and modelling; family, gender and daily activities; accessibility; spatial behaviour; spatial analysis and geographic information systems (GIS)</p>
<p>Susannah Bunce 416-287-7296 scbunce@utsc.utoronto.ca Bladen Wing 526C (UTSC)</p>	<p>Urban sustainability and communities, urban political ecology, community-based planning and development in cities, urban waterfront regeneration</p>
<p>Jing Chen (416) 978-7085 chenj@geog.utoronto.ca Room PGB306A (STG)</p>	<p>Remote sensing; geographical information systems; biogeochemical cycle modelling; hydrology; micrometeorology</p>
<p>Tenley Conway (905) 828-3928 tenley.conway@utoronto.ca SB3108 (UTM)</p>	<p>Land use/land cover modelling; urban vegetation; human drivers of urban ecosystems</p>
<p>Deborah Cowen (416) 946-0567 deb.cowen@utoronto.ca Room SS5033 (STG)</p>	<p>Geographies of citizenship, security and war; sub/urban political geography</p>
<p>Sharon Cowling (416) 978-0714 cowling@geog.utoronto.ca Room PGB201C (STG)</p>	<p>Earth system science; biogeography; paleoecology/paleoclimatology; physiological plant ecology</p>

<p>Amrita Daniere (416) 978-3236 amrita.daniere@utoronto.ca (UTM)</p>	<p>Urban infrastructure in developing countries; political economy of cities particularly in Southeast Asia and Latin America</p>
<p>Joe Desloges (416) 978-5234 desloges@geog.utoronto.ca Room PGB208 (STG)</p>	<p>Fluvial and glacial geomorphology; environmental reconstruction</p>
<p>Pierre Desrochers (905) 828-5206 pierre.desrochers@utoronto.ca Room SB3109 (UTM)</p>	<p>Economic development; technological innovation; entrepreneurship; international trade; business-environment interactions, energy policy; food policy</p>
<p>Miriam Diamond (416) 978-1586 miriam.diamond@utoronto.ca Room PGB207B (STG)</p>	<p>Sources, fate, exposure and health effects of, and policies related to, chemical contaminants, focusing on lakes, urban areas, and indoor environments</p>
<p>Richard DiFrancesco (416) 978-2935 difrance@geog.utoronto.ca Room SS5058 (STG)</p>	<p>Multiregional dynamic modelling; economic development in lagging regions; geopolitics and economic development planning in the Northwest Territories</p>
<p>James R Dunn jim.dunn@utoronto.ca</p>	<p>Social geography of health</p>
<p>Tim Duval (905) 569-4558 tim.duval@utoronto.ca Room DV 3265 (UTM)</p>	<p>Applied Ecohydrology; Wetland Hydrology and Biogeochemistry; Catchment Hydrology and Biogeochemistry; Stream and Wetland Restoration; Forest Disturbance and Stream Water Quality; Urbanization and Water and Solute Cycling</p>
<p>Matt Farish (416) 978-6671 farish@geog.utoronto.ca Room SS5040 (STG)</p>	<p>Militarism and geopolitics; the Cold War; environmental history; American studies; urban culture</p>
<p>Sarah Finkelstein (416) 978-1672 finkelstein@geog.utoronto.ca Room PGB207A, Lab PGB205B (STG)</p>	<p>Paleoecology; paleoclimatology; Holocene environmental change in the Arctic; wetlands; pollen analysis; microfossils; lake sediments</p>
<p>Meric Gertler (416) 978-5992 gertler@geog.utoronto.ca (STG)</p>	<p>Regional investment patterns; capital mobility and economic development</p>
<p>Emily Gilbert (416) 978-0751 emily.gilbert@utoronto.ca Room B301, University College (STG)</p>	<p>Citizenship, borders and security; nationalism, postcolonialism, globalization; the culture and politics of money; social and political theory; North America</p>
<p>Kanishka Goonewardena (416) 978-2974 kanishka.goonewardena@utoronto.ca Room SS5062 (STG)</p>	<p>Critical theory and Marxist philosophy; architecture and urban planning; colonialism, imperialism and nationalism; South Asia (Sri Lanka)</p>

<p>William Gough (416) 287-7245 gough@utsc.utoronto.ca (UTSC)</p>	<p>Climatic change; climate and ocean modelling; physical mixing processes in oceans</p>
<p>Jason Hackworth (416) 946-8764 jason.hackworth@utoronto.ca Room SS5010 (STG)</p>	<p>Urban and economic geography; political economy; uneven development; governance</p>
<p>Danny Harvey (416) 978-1588 harvey@geog.utoronto.ca Room SS5032 (STG)</p>	<p>Climate modelling; climatic change; energy and environment</p>
<p>Yuhong He (905) 569-4679 yuhong.he@utoronto.ca Room SE2113F (UTM)</p>	<p>Remote sensing; advanced spatial analysis; climate change; grassland productivity and biodiversity; forest disturbance</p>
<p>Paul Hess (416) 978-4955 hess@geog.utoronto.ca Room SS5067 (STG)</p>	<p>History of planning; travel behaviour; urban form analysis</p>
<p>Mark Hunter (416) 208-4764 mhunter@utsc.utoronto.ca Room B527 (UTSC)</p>	<p>Health; AIDS; sexuality; critical development studies; Africa; labour; ethnographic methods; education and class</p>
<p>Marney Isaac (416) 287-7279 Marney.Isaac@utoronto.ca Room SW517 (UTSC)</p>	<p>Agroecology; plant-soil interactions; biogeochemical cycling; environment and development; social-ecological systems; agrarian resource networks; temperate and tropical agroforestry</p>
<p>Ryan Isakson (416) 287-7345 risakson@utsc.utoronto.ca Room MW334 (UTSC)</p>	<p>Political economy of food; agricultural biodiversity; peasant livelihoods; land reform and agrarian transformation; Latin America; substantive economics; political ecology; critical development studies</p>
<p>Thembele Kepe (416) 287-7281 kepe@utsc.utoronto.ca Room SS5022 (STG)</p>	<p>People-environment interactions; land rights; politics of development projects; southern Africa</p>
<p>Deborah Leslie (416) 978-8467 leslie@geog.utoronto.ca Room SS5066 (STG)</p>	<p>Urban-economic, cultural and feminist geography</p>
<p>Robert Lewis (416) 978-1590 lewis@geog.utoronto.ca Room SS5003 (STG)</p>	<p>Historical geography of urban industrial change (1850-1950); unemployment and labour markets (1900-1939); industrial and working class suburbs (1850-1950)</p>
<p>Joseph Leydon (416) 946-0270/(905)569-4854 joseph.leydon@utoronto.ca Room SS5037 (STG)/Room SE2113C (UTM)</p>	<p>Regional geography of North America; colonial North America and the Caribbean; population dynamics; retail analysis</p>

<p>Jane Liu (905) 828-5298 liu@geog.utoronto.ca Room PGB200A (STG)</p>	<p>Atmosphere-biosphere interactions; remote sensing of the atmosphere and land; atmospheric chemistry-climate interactions; atmospheric chemistry modeling; Ecological modeling</p>
<p>Ken MacDonald (416) 287-7294 kmacd@utsc.utoronto.ca Room B584 (UTSC)</p>	<p>Cultural politics of conservation; nature-society theory; natural hazards; place and cultural identity; transnationalism; development; South Asia (Pakistan, India)</p>
<p>Virginia Maclaren (416) 978-4977 maclaren@geog.utoronto.ca Room SS5050 (STG)</p>	<p>Waste management; sustainable urban development; environmental assessment; South East Asia (Vietnam, Laos, Cambodia); China</p>
<p>Minelle Mahtani (416) 287-7302 mahtani@utsc.utoronto.ca (UTSC)</p>	<p>"Mixed race" identity; media and minority representation; critical journalism; women of colour in geography</p>
<p>Deborah McGregor (416) 978-6591 mcmgregor@geog.utoronto.ca Room SS5063 (STG)</p>	<p>Aboriginal issues; environmental ethics; traditional ecological knowledge; forest management</p>
<p>John Miron (416) 287-7287 miron@chass.utoronto.ca (UTSC)</p>	<p>Location theory; migration and regional economic growth; demographic change and housing demand</p>
<p>Carl Mitchell (416) 208-2744 cmitchell@utsc.utoronto.ca Room SY362 (UTSC)</p>	<p>Hydrology, biogeochemistry, mercury and methylmercury, anaerobic soils, wetlands, sulfur cycling, biogeochemical hot spots, snowmelt, redox chemistry, environmental microbiology</p>
<p>Scott Munro (905) 828-3929 scott.munro@utoronto.ca Room SB3105 (UTM)</p>	<p>Hydroclimatology of wetlands; microclimatology; energy exchange; modelling of glacier response to climate Phone: (905) 828-3929</p>
<p>B. Murck (905) 828-5426 bmurck@utm.utoronto.ca Room SB3110 (UTM)</p>	<p>Environmental issues in developing countries</p>
<p>Rajyashree (Raj) Narayanareddy 416-287-7297 rreddy@utsc.utoronto.ca Room B508 (UTSC)</p>	<p>Geographies of waste and labour, urban political ecology, global urbanism, cities of the global South, South Asia</p>
<p>Scott Prudham 416-978-1592 scott.prudham@utoronto.ca Room SS5007 (STG)</p>	<p>Political economy; environmental change and environmental politics; political ecology; industrial and alternative forestry regimes in western North America; commodification of nature, including market-based environmental regulation</p>
<p>Katharine Rankin (416) 978-1592 rankin@geog.utoronto.ca Room SS5002 (STG)</p>	<p>Politics of planning and development; feminist and critical theory; culture-economy articulations; comparative market regulation; ethnographic methods; South and Southeast Asia</p>

<p>Vince Robinson (905) 828-5299 doc.robinson@utoronto.ca Room SB2113D (UTM)</p>	<p>Geographic information systems; artificial intelligence; landscape ecology; ecological modelling</p>
<p>Susan Ruddick (416) 978-1589 ruddick@geog.utoronto.ca Room SS5059 (STG)</p>	<p>Social geography; social planning in North America and Europe; marginal groups (youth and women)</p>
<p>Matti Siemiatycki (416) 946-5145 siemiatycki@geog.utoronto.ca Room SS5041 (STG)</p>	<p>Transportation policy and planning; infrastructure finance and delivery; community and regional planning</p>
<p>Rachel Silvey (416) 978-6640 silvey@geog.utoronto.ca Room SS5036 (STG)</p>	<p>Migration; Indonesia; feminist theory; critical development studies; politics of transnationalism and Islam</p>
<p>Tat Smith tat.smith@utoronto.ca</p>	<p>Sustainable forest management</p>
<p>Andre Sorensen (416) 287-5607 sorensen@utsc.utoronto.ca Room B350 (UTSC)</p>	<p>Urban Japan; land use; suburban development</p>
<p>Sarah Wakefield Phone: (416) 978-3653 sarah.wakefield@utoronto.ca Room SS5014 (STG)</p>	<p>Urban environmental health</p>
<p>Alan Walks (416) 978-3653 alan.walks@utoronto.ca Room SB2113E (UTM)</p>	<p>Urban social, economic, and political geography; urban policy and neighbourhood inequality; urban form and political ideology; metropolitan governance; regional planning; housing and homelessness; gated communities; geographies of social justice</p>
<p>Mathew Wells (416) 208-4879 wells@utsc.utoronto.ca (UTSC)</p>	<p>Environmental fluid dynamics; turbulence modelling; mixing and dispersion of nutrients and larvae</p>
<p>Dana Wilson (905) 569-4556 dana.wilson@utoronto.ca Room SB3264 (UTM)</p>	<p>Social inequalities in health; youth health and development; health-related behaviours like gambling, physical activity, diet, substance use, crime and deviance; mixed methods</p>
<p>Kathi Wilson (905) 828-3864 kathi.wilson@utoronto.ca Room SB3111 (UTM)</p>	<p>Aboriginal health; neighbourhoods and health; immigration and health; access to health care</p>

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, MScPI and PhD degrees in Planning and a Master of Urban Design (MUDS) degree. Planning and Urban Design programs are described in a separate handbook for 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;
- Biogeochemistry and contaminants;
- Climate processes and climate and carbon cycle monitoring;
- Earth-surface process and hydrology; and
- Paleoclimate and biogeography.

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 www.geog.utoronto.ca/research.

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

Coastal Geomorphology and Sediment Transport; Climate Modelling; Fluvial Geomorphology; Soil Erosion; Process Hydrology; Bioclimatology; Palaeoecology and Palaeohydrology; Palaeoclimatic

Reconstruction; Impacts of Climatic Change; Digital Terrain Analysis; Soil and Water Chemistry; Environmental Chemistry; Biogeochemical Modelling; Limnology; Oceanography.

Environmental Geography and Resource Management

Environmental Assessment; Natural Resource Policy; Urban Environmental Management; Water Resource Management in the Great Lakes Basin; Risk Assessment; Waste Management and Recycling; Global Environmental Issues; Arid Lands Management; 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; Office Location; 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; Historical Geography of Latin America; Sense of Place; Urban Social Geography; Social Policy and Political Theory; Housing; Population and Demography; Feminist Geography; Homelessness; Community Development; Recreation and Tourism.

Spatial Information Systems

Remote Sensing; Geographic Information Systems; Simulation Modelling; Computer Cartography; Quantitative Methods; Spatial Statistics.

3.4 Information for New Students

The School of Graduate Studies (SGS) has important information for new students on their website at: www.sgs.utoronto.ca/informationfor/students/start.htm. This website has links to several resources, including:

- The Essential Grad Guide
- Registration and enrolment
- How to obtain a Tcard
- Housing
- Cost of Living
- SGS services (English Language Writing Skills Centre, Graduate Professional Skills, etc.)
- Information for International Students (entry to Canada, health insurance)

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. The MSc Planning and Master of Urban Design Studies (MUDS) programs are described in a separate handbook for Program in Planning.

All MA students must complete the Human Geography Core Course (GGR1105H) and all MSc students must complete the Physical Geography Core Course (GGR1200H).

Master's degree programs usually take one to two calendar years to complete.

4.2.1 Thesis Option

Completion of the Master's Thesis option requires that the student complete the equivalent of 3 half-credit courses (i.e., 1.5 FCEs), as specified below. **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.**

- the core course (GGR1105H for MA students, GGR1200H for MSc students);
- one additional half-credit course in geography (or from an approved listing of courses available from the graduate office); and
- an additional half-credit elective course which may be taken inside or outside the department.

Students are also required to complete a thesis, 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. The graduate office must be notified that the defence 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.

Once any final revisions or modifications have been made, the final thesis must be submitted to the School of Graduate Studies. 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 at <http://www.sgs.utoronto.ca/informationfor/students/finup/producingthesis.htm>.

Once any final revisions or modifications have been made, a bound copy of the final research paper must be submitted to the department within four weeks.

4.2.2 Research Paper Option

Completion of the Master's Research Paper option requires that the student complete the equivalent of six half-credit courses (i.e., 3.0 FCEs), outlined below. **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.**

- the core course (GGR1105H for MA students, GGR1200H for MSc students);
- three half-credit courses in geography (or from an approved listing of courses available from the graduate office);
- at least one half-credit course which must be taken outside the department; and
- an additional half-credit course which may be taken inside or outside the department.

Students are also required to complete a major research paper, 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. The graduate office must be notified that the defence exam will take place at least one week prior to the exam date and will prepare the examination file which can be collected just before the exam and returned immediately following the exam.

Once any final revisions or modifications have been made, a bound copy of the final research paper must be submitted to the department within four weeks.

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-April)	Coursework Research statement (includes proposed areas for PhD exam, reading list) Form supervisory committee
Year 1 (May)	Annual progress meeting
Year 1, 2 (June-October)	PhD Exam
Year 2 (October-February)	Research Proposal Exam
Year 2	Research, data collection, writing Annual progress meeting (May)
Year 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 student must submit a Supervisory Committee Approval form to the department for Associate Chair, Graduate approval.

The Supervisory Committee consists of the supervisor/co-supervisors, at least one additional geography graduate faculty member 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 Research Statement

PhD students will submit a Research Statement to the Supervisory Committee consisting of three parts:

- a 1-2 page statement on the proposed PhD topic;
- a one page report on the PhD exam's proposed three areas of concentration; and
- a proposed outline of reading materials and explanatory notes for the PhD exam.

The Research Statement should be prepared in the second term of the first year. The purpose of the research statement is to provide PhD students with early direction. Physical Geography and Natural Systems students could consider the Research Statement as phase 1 of the Research Proposal and start with field work in the third term of the first year. The Supervisory Committee will judge the overall progress of students and provide input for funding, workload, and fellowship nomination decisions. A copy of the statement must also be submitted to the graduate office for review.

4.3.6 Annual Progress Reports

Progress review meetings must be held in May of each year (or more often if the committee or Associate Chair, Graduate requires). 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 and is recorded in the student's ROSI record. After the first year, progress reports should be 2-5 pages. Progress reports can be accompanied by materials such as draft questionnaires, initial tabulations and analysis of results, or draft thesis chapters.

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.

4.3.7 PhD Examination

Students will take a written and oral PhD Examination administered by the supervisory committee between June of year one and no later than October of year two. 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 areas of concentration of the examination are to be jointly determined by the supervisory committee and the student, is to be laid out in the research statement, and is to be confirmed in the supervisory committee meeting. (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 PhD examination. The student should compile an appropriate reading list for each area of study. The reading list should be circulated to all committee members for their comments and should form the basis of the examination. The supervisor, after discussion with the student and committee members, is responsible for preparing the examination paper on the basis of input received from the committee members. The detailed instructions, e.g., the grouping of the questions into areas of concentration, the number of questions to be answered, the period of time given for the examination, the expected length of each answer, and the degree and style of referencing, should be finalized in consultation with the student and committee members.

The exam should have three subject areas with three questions each. The PhD examination is comprised of a written section and an oral section. The written section can be completed in one of the three following formats:

- The student answers one question from each subject area over eight hours in a closed room on campus. It is not expected that the student will be able to properly cite their written work and a bibliography is not required.
- The student answers one question from each subject area over a five day period off-campus. It is expected that students will cite their work, citations will be drawn generally from the reading list. Responses will be more in-depth and the expected length of each response is 12-18 pages double-spaced. The reading list should be included as an attachment, plus any other works cited.
- The student answers each question from each subject area over a fifteen day period off-campus. Although the questions will be based on the reading list, it is expected that the student will also draw upon additional materials and supplementary research. For this format, it is expected that students will produce high-quality work with a full list of references. The length of each response is approximately 20 pages.

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 duplicate copies of the written answers and submit a copy to each committee member at an appointed time and a copy for the graduate office. The graduate office must be notified that the exam will take place at least one week prior to the exam date.

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

- 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: in terms of capturing the essence of the questions posed; ability to address the concerns raised and to deliver reasoned answers to legitimate criticisms;
- Familiarity with, and sensitivity to, the broader range of matters raised by other questions on the examination (other than the questions answered in writing);
- Oral responses to any questions related to the scope of the exam;
- Previous course record and the quality of their previous research papers.

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.

A PhD exam can be adjourned once to satisfy additional conditions. A reconvened exam must take place within six months and the result must be pass/fail. A student who has failed the PhD examination will be permitted to repeat the exam once within six months. The department may recommend termination of a student's program if they fail the repeat examination.

4.3.8 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 thesis research project. The committee will sign a Research Agreement, the content of which will be determined through negotiation by the student and the committee. The Research Proposal should be defended by the end of the first term in year two and no later than the end of February in year two. In some cases, the Research Proposal could be presented after four courses have been completed and in conjunction with the PhD Examination.

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, a discussion of the research context in which it is set, research objectives or hypotheses, a brief outline of the sources and methodology, and a suggested timetable for completion. The necessity of providing additional background information on the research topic may lead to a lengthening of this paper. The research proposal should be defended prior to extensive research. It should not constitute a draft of the final thesis.

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.

4.3.9 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 the an extension has been approved.

4.3.10 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.

4.3.11 The Thesis

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

A thesis should have a coherent topic with an introduction presenting the general theme of the research and a conclusion summarizing and integrating the major findings. Nonetheless, it may contain a collection of several papers (normally a minimum of three accepted for publication or submitted for review). The collection of papers may be expanded or supplemented by unpublished material, scholarly notes, and necessary appendices. In all theses, pagination should be continuous; there should be a common table of contents and an integrated bibliography for the whole thesis.

Information on thesis formatting, copyrighting, etc. is available from the School of Graduate Studies website at www.sgs.utoronto.ca/informationfor/students/finup/producingthesis.htm

4.3.12 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.

4.3.13 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 eight 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 www.sgs.utoronto.ca/informationfor/students/finup/oralex.htm

4.3.14 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 www.sgs.utoronto.ca/informationfor/students/finup/producingthesis.htm

4.3.15 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 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.

5.1 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.

5.2 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	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.

5.3 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.

Upon successful completion of the requirements, students receive the notation "Completed Collaborative Program in Aboriginal Health" on their transcripts.

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.ca for detailed information about admission and completion requirements.

5.4 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 successfully complete the requirements of the collaborative program will receive a certificate and the notation “Completed Collaborative Program in Asia-Pacific Studies” on their transcript.

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 www.utoronto.ca/asiapacific-ma for detailed information about admission and completion requirements.

5.5 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 successfully complete the requirements of the Collaborative Program will receive the notation “Completed Collaborative Program in Diaspora and Transnationalism Studies” on their transcript.

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

Please consult the Centre for Diaspora and Transnationalism Studies website at www.utoronto.ca/cdts for detailed information about admission and completion requirements.

5.6 Dynamics of Global Change (PhD)

The Collaborative Program in the Dynamics of Global Change is a multidisciplinary program that explores the frontiers of global change across a wide range of issues and identifies the underlying dynamics of change. In a rapidly evolving, complex, and loosely structured global system that engages new actors, change occurs at multiple levels and can have amplifying effects in unexpected ways. This program explores these complex interconnections across disciplinary fields and issue areas. From their home departments, students may take up questions from their own disciplines but explore them through the theoretical and methodological lens of global change.

Students who successfully complete the requirements of the Collaborative Program will receive the notation “Completed Collaborative Program in the Dynamics of Global Change” on their transcript.

Program	Specific Coursework Requirements	Total FCE required
PhD Environmental/Resource, Urban/Economic, Historical/Cultural/Social	0.5 FCE GGR1100H 1.0 FCE geography electives 0.5 FCE DCG1000H 0.5 FCE in DCG modules 0.5 FCE electives in any subject	3.0 FCE

Please consult the Dynamics of Global Change program website at www.utoronto.ca/mcis/dgc for detailed information about admission and completion requirements.

5.7 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.

Upon successful completion of the requirements, students receive the notation “Completed Collaborative Program in Ethnic and Pluralism Studies” on their transcripts.

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 www.utoronto.ca/ethnicstudies/ for detailed information about admission and completion requirements.

5.8 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 successfully complete the requirements of the Collaborative Program will receive the notation "Completed Collaborative Program in South Asian Studies" on their transcript.

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 www.utoronto.ca/csas/ for detailed information about admission and completion requirements.

5.9 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 successfully complete the requirements of the collaborative program will receive the notation "Completed Collaborative Program in Women and Gender Studies" on their transcript.

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 www.utoronto.ca/wgsi for detailed information about admission and completion requirements.

6 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 one year). In 2012-2013 the minimum financial support for students in the PhD and Master's programs is \$15,000 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.

6.1 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.

6.1.1 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.

6.1.2 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)

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.

Master's Tuition Fee Bursary

The Master's Tuition fee bursaries are awarded by SGS to master's students programs who still have a small amount of work outstanding, due to reasons and factors that are unanticipated and beyond the student's control. The student will have registered full-time from the beginning of their programs and their minimum period of registration (i.e. program length) will have ended on or before August of the year previous to application. The bursary allows the recipient to pay the equivalent of part-time fee for the last session that they are registered and assessed fees as full-time students while they complete their degree requirements. The student applies in the session that they are going to complete their degree requirements; either the Fall Session or Winter Session.

6.1.3 Faculty of Arts & Science Awards

A listing of awards and application details is available at www.artsci.utoronto.ca/current/graduate/schps. 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.

6.1.4 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.

Alpar Scholarship

Named after Mrs. Zehra Alpar, Student Advisor from the 1960s through the 1990s, the award is for an outstanding graduate student making good progress toward completing the degree.

John D. Barnes Geodetic Sciences Fellowship

This award is in memory of John D. Barnes who supported the Survey Science program at the University of Toronto at Mississauga. To be awarded to a graduate student enrolled in a program in geography with preference given to a student working in the field of GIS/Geomatics.

Geography Toronto Award

A commemorative memento for a graduating student who has made an outstanding contribution to the life of the Geography Department while at the same time achieving above-average academic success.

Graduate Geography & Planning Student Society (GGAPSS) Endowed Bursary

Awarded on the basis of financial need to at least one graduate student in good academic standing with an overall average of "B+".

F. Kenneth Hare Scholarship in the Environment

This award is in honour of Professor F. Kenneth Hare. For an outstanding doctoral-stream graduate student in the collaborative environmental programs between the Centre for Environment and the Department of Geography.

Oscar J. Marshall Graduate Scholarship

This award is in memory of Oscar J. Marshall who supported the Survey Science program at the University of Toronto at Mississauga. To be awarded to a graduate student enrolled in a program in geography with preference given to a student working in the field of GIS/Land Information Systems/Geomatics/Remote Sensing.

Joseph A. May Scholarship

This award is in honour of long-time faculty member Professor Joe May, and is given to an outstanding graduate student who has approached the study of one or more of the following fields from a qualitative rather than a quantitative perspective: history and philosophy of geographic thought, historical geography, social and cultural geography, and geography of Canada.

McMaster Trust

Named after the Department's long-time Business Officer, Mrs. Anne McMaster, this award is to help defray the cost of field-course-related expenses or research-related expenses.

J. E. R. Ross Scholarship

This award is in memory of J.E.R. Ross who supported the Survey Science program at the University of Toronto at Mississauga. To be awarded to a graduate student enrolled in a program in geography and making good progress towards their degree.

Griffith Taylor Scholarship

This award, in honour of the founder and first chair of the Department of Geography at the University of Toronto, was established by the U of T Geography Alumni, and is given to an outstanding student completing either a Master's or PhD program. Special consideration will be given for having international peer-reviewed publications.

University of Toronto Association of Graduate Alumni (UTAGA) TA Award

An award in recognition of an excellent teaching assistant for undergraduate geography courses taught at the St. George campus. All teaching assistants will be considered. Nominations from faculty, students and TA's are welcomed.

Donald F. Putnam Graduate Scholarship.

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.

George Tatham Geography Alumni Graduate Scholarship

Awarded to a graduate student registered in full-time studies on the basis of academic merit.

John Horner Graduate Scholarship in Geography

Awarded to a graduate student in the Department of Geography based on academic merit. Financial need will also be considered.

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
- Edward Sorbara/Urban Development Institute OGS in Geography/Planning
- 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.

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

6.2 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.

6.3 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.

7 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.

7.1 Core and Reading Courses

GGR 1105H Human Geography Core Course (MA level)

(D. Cowen)

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)

(A. Boland)

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

(W. Gough)

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.

7.2 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.

GGR1203H Coastal Geomorphology

(B. Greenwood)

An advanced lecture/seminar/reading course designed to develop those basic principles of the hydrodynamics of waves and currents necessary for understanding the mechanics of entrainment, transport and deposition of sediments and the modes and rates of sediment transport in wave-dominated nearshore zones. It will provide a framework for the explanation of morphology at scales ranging from bedforms to bars to the full shoreface. Emphasis will be placed upon the physical basis, both theoretical and empirical, for the construction of models of transport processes and equilibrium morphologies.

GGR1211H The Global Carbon Cycle: From Rubisco to the Earth's Mantle

(S. Cowling)

The objective of the course is to give students an appreciation for the large range in spatio-temporal processes involved in cycling of carbon from one earth system to another (i.e. biosphere to atmosphere or lithosphere to oceans). Course material will emphasize small-scale perturbations to carbon resulting from leaf-level responses to environmental conditions to large-scale perturbations resulting from tectonic processes. Entire courses could be designed around one scale or another but the purpose of this seminar course is to provide the full range of processes affecting the turnover of carbon, ranging from days to billions of years.

JGE1212H Fate of Contaminants in the Environment

(M. Diamond)

Qualitative and quantitative description of the chemistry and movement of contaminants in the environment, focusing on terrestrial and freshwater systems. Discuss range of contaminants, inorganic (metals) and organic, and processes affecting their fate.

GGR1214H Global Ecology and Biogeochemical Cycles

(S. Cowling)

This is a seminar course focusing on issues related to the exchange of carbon, water and other substances (nitrogen, phosphorus, sulfur, iron) between the Earth's atmosphere, oceans, and biosphere. Initial seminars on the role of the biosphere (terrestrial, oceanic) in global carbon cycling and on the "missing" global carbon sink, will be given by the instructor. Students will be asked to select one of the course's themes and prepare a short introductory lecture to help facilitate discussion of selected research papers. Course themes include the global hydrological cycle, terrestrial resource limitations (nitrogen and phosphorus cycles), marine resource limitations (iron, zinc and phosphorus cycles) and data collection and methods. Examples and case studies will be viewed from the palaeo-, contemporary and the future global change perspective.

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

(N. Basiliko)

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.

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

GGR1303H Topics in Paleoenvironmental Research

(S. Finkelstein)

The course provides students with an introduction to environmental changes during the Quaternary and to the methods used to reconstruct them. Topics include causes of climatic change on decadal to supra-millennial timescales, the use of proxy data (biological indicators) to infer past environments, dating methods, some of the statistical approaches to analyzing paleo-data, and the responses of ecosystems to Quaternary paleoenvironmental change. Case studies from selected regions will be used to explore these concepts in more depth. Students will work throughout the term on a review paper dealing with a topic relevant to the course, and will present an oral presentation to the class. Seminars will centre on readings from key textbooks or the scientific literature, and will consist of participatory discussions. Lab assignments will provide students with hands-on experience reconstructing paleoenvironments.

GGR1304H Landscape Biogeography

(V. Robinson)

A geographical, multi-scale perspective on the relationships between land use/land cover change and the distribution, movement, dispersal, abundance, and diversity of avian or mammalian species. Various research methods are discussed and work is done using geographic information systems to analyze landscapes in conjunction with bird and mammal count data. Landscape measures such as dominance, contagion, shape, patch/edge measures, connectivity will be considered in relation to land use/land cover change and distribution of selected species. The juxtaposition of cover types will be analyzed and changes in a landscape will be related to selected species.

GGR1305H Biogeography

(S. Finkelstein)

This lecture/seminar course examines patterns and processes in plant and animal distributions through space and time. Topics covered include ecological and evolutionary dynamics, disturbance, dispersal, migration, continental drift, paleoenvironments and island biogeography. We will also examine terrestrial and marine biomes, microbial ecosystems and address recent biogeographic changes and human impact.

GGR1306H Field Experimental Techniques in Hydroclimatology

(S. Munro)

Simple approaches to modelling the energy transfer and evaporation from individual types of surfaces are explored, and comparisons with field data are made. The problem of transfer between adjacent surfaces is also examined to introduce the multiple surface problem in environmental modelling. Although use of existing models will be made, it is helpful to know a computer language.

7.3 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.

JPG1404H 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.

JPG1406H 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.

JPG1407H 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: JPG 1406H

JPG1408H 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

(V. Maclaren)

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.

JPG1418H Rural Land Use Planning

(M. Bunce)

The examination of policy and planning issues that arise from the growing space, resource and amenity demands on rural lands. Particular attention will be paid to the distinctiveness of rural planning problems and to the development of appropriate policies and practices for rural areas. Following a discussion of conceptual questions such as the distinctiveness of rurality, changing rural-urban relations, the value of countryside, the role of rural land and the objectives of rural planning, the course will focus on specific topics including: urban containment, agricultural land use planning, resource management, environmental conservation, amenity planning, settlement design and rural economic development.

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

(H. Friedmann)

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

(H. Friedmann)

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.

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.

7.4 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.

JPG1507H Housing Markets and Housing Policy

(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.

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

(P. Hess)

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.

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 sitting on the sitting 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.

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.

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. Daniere, K. Wilson)

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.

7.5 Cultural/Historical/Social Geography

JPG 1111H Research Design

(K. Wilson, A. Daniere)

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.

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.

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.

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?

JPG1710H Historic Preservation Planning

(TBA)

The first part of this course is a reading program combined with seminar discussions. Issues covered include: the philosophical approach to historic preservation, approaches to preservation in Europe, the United States and the Third World. Particular attention is given to preservation planning in Canada with special emphasis on Ontario. The roles of the public and private sectors are discussed. The second part of the course focuses on developing research and presentation skills with the preparation of a planning report in support of historic preservation in some area of Toronto or a nearby small town. The goal is to involve everyone with documentary resources and to draw upon these primary sources to their fullest potential in developing a case for preservation.

JPG1713H Place, Design and Landscape

(E. Relph)

The theory, sense and identity of place; everyday and exceptional places; the relationships of places to their historical, community and landscape context; the local and the non-local. Responsive, implicate and imposed order in the design of places and landscapes. Approaches to the analysis and appreciation of place; the commercial exploitation of locality; locality in a global economy. Place-making through community involvement, urban design and environmental design; environmental ethics and built environments; limits to the design of places.

GGR1714H Cultural and Critical Geographies

(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.

JPG1810H Globalization and Postmodernism

(K. Goonewardena)

This seminar broaches the question: what's globalization got to do with postmodernism? Both terms will be interrogated within - or against - a conceptual framework that brings together the usually disparate discourses of "political economy" and "cultural studies". Following Fredric Jameson's theorization of postmodernism as "the cultural logic of late capitalism", the seminar will explore how both globalization and postmodernism relate to the historical geography of capitalism; highlight the triangulations of capitalism, modernism and imperialism; and then proceed to examine the consequences of postmodern culture and politics under the auspices of global capital. It will cover some essential background needed to pursue interdisciplinary research on the cultures and politics of globalization and postmodernism.

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.

7.6 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.

GGR1907H Advanced Geographical Information Systems

(D. Boyes)

This course covers advanced topics in spatial analysis and data modeling using geographic information systems (GIS). The lectures discuss the underlying theory, and how it is implemented in GIS software. The lab sessions give students the opportunity to learn for themselves how to put that theory into practice, gaining hands-on experience with ESRI ArcInfo software, including several extensions. Students will submit a proposal for a topic of interest, conduct the proposed research, and then present findings in a final report.

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.

GGR1912 Advanced Remote Sensing

(Y. He)

TBA

JPG1914H Spatial Information Systems

(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.

8 Policies and Guidelines

8.1 General

There are numerous policies and guidelines affecting graduate studies. These appear on the SGS Web site at www.sgs.utoronto.ca/governance/policies.htm:

- 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.

8.2 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 www.sgs.utoronto.ca/governance/policies.htm and provides an overview of the policy and requirements.

The Office of Research Ethics web site is located at www.research.utoronto.ca/for-researchers-administrators/ethics/ and provides detailed policies, application forms, and all the information and resource materials needed to submit an ethics protocol for review.

8.3 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".

8.4 Safety in Field Research and Safety Abroad

Some students may be required to travel away from Toronto and even outside of Canada in order to conduct fieldwork or data collection. The Safety in Field Research policy states that working responsibility for safety in field research rests primarily upon the faculty or students who directly supervise and carry out the research on location. All fieldwork participants are required to use good common sense. The University's concern in this policy is that due diligence be exercised by all parties in giving attention to the nature of, and the means for dealing with, the categories of risk that may be associated with each location

and kind of field research. It is the intention of the University that participants enter into field research on the basis of their informed understanding of the associated risks and their consent to the means for dealing with such risks.

Students who engage in fieldwork outside the University's geographical boundaries should be familiar with the University of Toronto's policy for Safety in Field Research and the Office of Environmental Health Guidelines for Safety in Field Research at www.ehs.utoronto.ca/resources/manindex/policies/fieldres.htm. Students travelling outside of Canada must also be familiar with the Safety Abroad Manual, available at www.cie.utoronto.ca/Safety/Safety-Abroad-Travel-Guide.htm.

All students who are engaging in field research off-campus must submit a Field Research Planning Record available from the Graduate Office.

Students who are travelling outside of Canada must complete:

- Terms for Participation Form
- Field Research Consent and Release Liability Form
- Field Research Planning Record
- Safety Abroad Registration Form (this information will be used to register students with the Safety Abroad database)
- Attend pre-departure training with the Safety Abroad Office

All forms must be submitted to the graduate office two weeks prior to departure.

8.5 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.