

## Geography (GEOG)

Department of Geography and Environmental Studies

Faculty of Arts and Social Sciences

Faculty of Science

GEOG 1001 [1.0 credit] (formerly 45.101)

### Geography and the Environment

Human activity and the physical environment and links between them. Social, economic, cultural, and political forces shaping human activity at scales ranging from local to global. Methods of collecting and interpreting geographic information. (Also listed as ENST 1001.)

Lectures two hours a week and workshops/discussions one hour a week.

GEOG 2004 [0.5 credit]

### Introduction to Geomatics

Introduction to the fundamentals within the Geomatics fields of cartography, remote sensing and geographic information systems, including: history of maps and mapping; map design; data acquisition procedures; digital data display and analysis; and integration of the Geomatics fields.

Prerequisite: second year standing, or enrolment in B.A. (GIP), B.Sc. (GIP concentration), or GIP minor.

Lectures two hours a week, workshops/discussion two hours a week.

GEOG 2005 [0.5 credit] (formerly 45.205\*)

### Research Methods in Geography

Theory and method in the production of geographical knowledge. Topics include: logic of research design in human and physical geography; issues of data type, quality, and acquisition with extensive and intensive research approaches; techniques of data analysis and presentation, including computer applications; research ethics.

Prerequisite: GEOG 1001, ENST 1001 or 1.0 credit in Geography at the 1000-level and second-year standing, or permission of the Department.

Lectures two hours a week, laboratory two hours a week.

GEOG 2006 [0.5 credit] (formerly 45.206\*)

### Statistical Methods in Geography

Descriptive and inferential statistical methods applied to quantitative and qualitative data in contemporary human and physical geography. Introduction to statistical and graphical computer applications.

Precludes additional credit for STAT 2507, STAT 2606, ECON 2200, PSYCH 2002, PSCI 2700.

Prerequisite: GEOG 2005 and GEOG 2004, or permission of the Department.

Lectures two hours a week, laboratory two hours a week.

GEOG 2007 [0.5 credit] (formerly 45.207\*)

### An Introduction to Geographic Information Systems

Data in a spatial context; spatial data structures, georeferencing, data query; mapping; creating spatial databases; selected topics in GIS application to environmental, land-use planning and market analysis issues.

Prerequisite: GEOG 2004 or permission of the Department. Familiarity with personal computers is assumed.

Workshop three hours a week.

GEOG 2100 [0.5 credit]

### Physical Geography

A survey of the form and processes operating in the Earth-atmosphere system, including: weather, climate and climate change, landform development, soils, the hydrologic cycle, the Quaternary earth history.

Precludes additional credit for GEOG 1005, GEOG 1100 (taken before 2002/03) and GEOL 1005.

Prerequisite: GEOG 1001, or ENST 1001, or first year B.Sc. or permission of the department.

Lecture three hours a week, laboratory three hours a week, and a field excursion.

GEOG 2101 [0.5 credit] (formerly 45.211\*)

### Environmental Geography

Biophysical elements of the environment; human-environment interactions; natural hazards; human response to environmental change and variation; land-use planning and risk management.

Precludes additional credit for GEOG 1002 (taken before 2002-03).

Prerequisite: 1.0 credit in Geography at the 1000-level, or ENST 1001 or second-year standing.

Lectures two hours a week, laboratory two hours a week.

GEOG 2102 [0.5 credit] (formerly 45.212\*)

### Physical Environments of Canada

Canada's physiography, climates, biogeography, soils, and landforms.

Prerequisite: GEOG 1100 (taken before 2002-03) or GEOG 2100, or GEOG 1005 (taken before 2002-03)/GEOL 1005.

Lectures two hours a week, laboratory two hours a week.

GEOG 2200 [0.5 credit] (formerly 45.220\*)

### Global Change: Economy, Culture, and Environment

Economic and cultural globalization, global environmental change, and the linkages between them. Global-local interactions. Economic and environmental sustainability. Natural resources and industrial systems in the global economy. Culture, politics, and the global environment.

Prerequisite: 1.0 credit in Geography at the 1000-level, or ENST 1001, or second-year standing.

Lectures two hours a week, laboratory one hour a week.

GEOG 2300 [0.5 credit] (formerly 45.230\*)

### Culture, Society and Space

Ways in which individuals and societies create, modify, and interact with environments; social dimensions of landscapes; the culture and politics of space; geographies of identity.

Prerequisite: 1.0 credit in Geography at the 1000-level or ENST 1001 or second-year standing.

Lectures two hours a week, discussion one hour a week.

GEOG 2505 [0.5 credit] (formerly 45.255\*)

### Canada: Contemporary Geographic Issues

Analysis and interpretation of Canada, its regions and localities, using a range of geographical concepts; interactions among society, the economy and the environment, and related policy issues.

Prerequisite: second-year standing or permission of the Department.

Lectures two hours a week, discussion one hour a week.

GEOG 2600 [0.5 credit]

### Geography behind the Headlines

Exploration of the geographical backgrounds to selected issues of current public interest, through geography's perspective of integrating human and physical environments. Issues selected will be structured from the global through the national/regional to the local, identifying the interdependencies among the scales.

Precludes additional credit for GEOG 1003 (taken before 2002-03).

Lecture three hours a week.

GEOG 3000 [0.5 credit] (formerly 45.300\*)

### Honours Field Course and Tutorial

Geographical techniques of field observation, measurement, recording, and analysis involving work in groups, normally in the Ottawa region. Development of research, writing, and thinking skills in a tutorial setting. A supplementary charge may apply.

Prerequisite: third-year Honours standing in Geography, or permission of the Department.

A four-day field camp, tutorial one hour a week.

GEOG 3001 [0.5 credit] (formerly 45.301\*)

### Social Geography Methods

Methods of acquiring, analyzing and presenting primary information relating to contemporary issues in social geography; technical and ethical aspects of such topics as: mental mapping, sampling and questionnaire design,

participant observation and interviewing, discourse analysis, and qualitative research methods.

Prerequisite: GEOG 2005.

Lectures two hours a week, discussion group one hour a week.

GEOG 3002 [0.5 credit] (formerly 45.302\*)

**Air Photo Interpretation and Remote Sensing**

Aerial photography and digital remote sensing; visual interpretation of land use, landforms, and surficial materials; introduction to digital image processing and analysis.

Prerequisite: GEOG 2004, third-year standing, or permission of the Department.

Lectures two hours a week, laboratory two hours a week.

GEOG 3003 [0.5 credit] (formerly 45.303\*)

**Quantitative Geography**

Multivariate quantitative methods, such as multiple correlation and regression, factor analysis, cluster analysis, discriminant analysis, and analysis of variance as applied to classification, regionalization, explanation and hypothesis testing in geographical research.

Prerequisite: GEOG 2006 or permission of the Department.

Lectures two hours a week, laboratory two hours a week.

GEOG 3005 [0.5 credit] (formerly 45.305\*)

**Geospatial Analysis**

Acquisition, manipulation, and display of spatially referenced information using Geographic Information Systems (GIS). Spatial modeling, site selection, and routing analysis in raster and vector GIS.

Prerequisite: GEOG 2007.

Workshop three hours a week.

GEOG 3006 [0.5 credit] (formerly 45.306\*)

**Applications of Geographic Information Systems**

Project design and customization, digital atlas compilation and geomatics education.

Prerequisite: GEOG 3005.

Workshop three hours a week.

GEOG 3007 [0.5 credit] (formerly 45.307\*)

**Cartographic Theory and Design**

Principles of cartography, cartographic communication and map design; practical work designed to provide experience in solving problems of cartographic representation.

Prerequisite: GEOG 2004 and third-year standing, or permission of the Department.

Lectures and laboratory four hours a week.

GEOG 3101 [0.5 credit] (formerly 45.311\*)

**Biophysical Resource Assessment**

The acquisition and interpretation of biophysical information, with regard to defining limitations on the use of the environment; field and laboratory techniques with an emphasis on the biophysical resources of a local area. A supplementary charge may apply

Prerequisite: one of GEOG 1005 (taken before 2002-03)/GEOL 1005, GEOG 1100 (taken before 2002-03), GEOG 2100, GEOG 2101 or permission of the Department.

Lectures, laboratory and fieldwork five hours a week.

GEOG 3102 [0.5 credit] (formerly 45.312\*)

**Geomorphology**

Geomorphological agents of landscape change at the Earth's surface, emphasizing the role of water, ice and wind in erosion and deposition; use of geomorphic indicators in studies of environmental change.

Prerequisites: GEOG 1005 (taken before 2002-03)/GEOL 1005, GEOG 1100 (taken before 2002-03) or GEOG 2100 and third-year standing, or permission of the Department.

Lectures two hours a week, laboratory two hours a week, one field excursion.

GEOG 3103 [0.5 credit] (formerly 45.313\*)

**Watershed Hydrology**

Principles of hydrology at local and watershed scales, with an emphasis on: soil moisture regimes; field data collection and analysis of surface water or snow and ice conditions; hydrologic processes in cold environments; and regional runoff regimes in Canada. A supplementary charge may apply.

Prerequisite: GEOG 1100 (taken before 2002-03) or GEOG 2100, or permission of the Department.

Note: first-year mathematics and physics are recommended.

Lectures two hours a week, laboratory three hours a week, two field excursions, including a two-day excursion. Students are responsible for long-distance transportation, food and lodging costs associated with the field excursions.

GEOG 3104 [0.5 credit]

**Principles of Biogeography**

Contemporary and past controls on distribution of plants and animals at global, regional and local scales; significance of these distributions. This course is also listed as BIOL 3608.

Prerequisite: GEOG 2100, BIOL 2600, or permission of the Department.

Lectures 3 hours a week.

GEOG 3105 [0.5 credit] (formerly 45.315\*)

**Climate and Atmospheric Change**

The global climate system, with emphasis on global change variability over the historical and modern periods; the changing composition of the atmosphere and its impact on climate; analysis and interpretation of climatic and atmospheric data; modeling of climate systems.

Prerequisites: GEOG 2006 and GEOG 1100 (taken before 2002-03) or GEOG 2100; or permission of the Department.

Lecture two hours a week, laboratory two hours a week.

GEOG 3108 [0.5 credit] (formerly 45.318\*)

**Soil Properties**

The physical and chemical properties of soils; soil-water relationships, weathering processes, soil mineralogy, cation exchange, soil pH. A plant-oriented perspective predominates.

Precludes additional credit for GEOG 3008.

Prerequisite: GEOG 1005 (taken before 2002-03) /GEOL 1005, or GEOG 1100 (taken before 2002-03), or GEOG 2100, or permission of the Department.

Lectures and laboratory five hours a week.

GEOG 3200 [0.5 credit] (formerly 45.320\*)

**The Canadian City: Environment, Structure and Contemporary Problems**

Internal structure of the Western city with specific application to Canadian cities; current urban problems with particular focus on inner city revitalization, peripheral expansion, metropolitan organization and transportation systems and their interaction with land use.

Prerequisite: GEOG 2200 or permission of the Department.

Lectures three hours a week.

GEOG 3206 [0.5 credit] (formerly 45.326\*)

**Health, Environment, and Society**

Factors influencing human health in an ecological framework involving population structure, habitat, and behaviour. Changes in the distribution of communicable and degenerative diseases are portrayed as being related to historical and contemporary development and globalization processes. Sources, types and characteristics of geographically referenced health information.

Precludes additional credit for GEOG 4206 (taken before 1999-2000).

Prerequisite: third-year standing.

Lectures three hours a week.

GEOG 3209 [0.5 credit] (formerly 45.329\*)

**Sustainability and Environment in the South**

A political ecology approach to the concept of sustainability in the South; case studies from Africa, Asia, and Latin America to analyze the relationship between people and the environment at scales ranging from the intra-household and local to the international.

Prerequisite: third-year standing and GEOG 2200 or GEOG 2300 or GEOG 2301 (taken before 1999-2000); or permission of the Department.

Lectures two hours a week, discussion groups one hour a week.

GEOG 3300 [0.5 credit] (formerly 45.330\*)

**Environment and Sustainability in Sub-Saharan Africa**  
Historical analysis of contemporary problems faced by selected states in sub-Saharan Africa, focusing on environmental sustainability in the context of political, social and economic change, at scales from the intra-household and local to national.

Prerequisite: third-year standing or permission of the Department.

Lectures two hours a week, discussion groups one hour a week.

GEOG 3305 [1.0 credit] (formerly 45.335)

**The Development of Canada: The Historical Geographical Perspective**

Canada from pre-history to the present; issues of culture and economy in a geographical context; methodology in historical geography.

Prerequisite: GEOG 2300 or HIST 2303 or HIST 2304; or permission of the Department.

Lectures three hours a week.

GEOG 3306 [0.5 credit] (formerly 45.336\*)

**Resource Analysis in Geography**

Human dimensions of resource assessment, use and management; topics relating to resource allocation theory and methods, carrying capacity, environmental and social impact assessment, public participation and resources policies; emphasis on Canadian case studies.

Prerequisite: at least third-year standing in Geography or Environmental Studies or Environmental Science, or permission of the Department.

Lectures and laboratory four hours a week.

GEOG 3307 [0.5 credit] (formerly 45.337\*)

**Contemporary Geopolitics**

Geographical understandings of power and conflict at the global scale; geographical discourses of peace and violence in the contemporary world system, critical perspectives on the world political map, geographical patterns of inequity and global order.

Prerequisites: third-year standing.

Lecture three hours a week.

GEOG 3404 [0.5 credit] (formerly 45.344\*)

**Economic Geography**

Geography of production, marketing, and consumption. Locational decision making in the private and public sectors with particular reference to manufacturing and service industries.

Prerequisite: GEOG 2200 or permission of the Department.

Lectures three hours a week.

GEOG 3501 [0.5 credit] (formerly 45.351\*)

**Northern Lands**

The physical characteristics, historical geography, economic resources, settlement patterns and problems and the future development of Arctic and Subarctic lands, focusing primarily on Canada.

Prerequisite: third-year standing or permission of the Department.

Lectures three hours a week.

GEOG 3600 [0.5 credit] (formerly 45.360\*)

**The Post-Soviet States: A Geographic Perspective**

A general review of the physical, social and economic geography of the Soviet Union and successor states, with detailed analyses of selected topics related to social and population conditions, resources development and environmental problems, including comparisons with North America.

Prerequisite: third-year standing.

Lectures three hours a week.

GEOG 3602 [0.5 credit] (formerly 45.362\*)

**Geography of Southern Africa**

Broad geographical coverage of the subcontinent from Zambia southwards with particular reference to the environmental, historical, economic, cultural and political dimensions necessary to understand the contemporary

context of and around South Africa.

Prerequisite: third-year standing or permission of the Department.

Lectures three hours a week.

GEOG 3603 [0.5 credit] (formerly 45.363\*)

**Geography of Europe**

Systematic geographic survey of Europe with particular reference to historical, cultural, economic, political, resource, and environmental dimensions.

Prerequisite: third-year standing or permission of the Department.

Lectures three hours a week.

GEOG 3700 [0.5 credit] (formerly 45.370\*)

**Population Geography**

The distributional aspects of population attributes; areal patterns of population characteristics and their spatial variations associated with differences in the nature of places; migratory movements within the framework of spatial models of interactions between locations.

Prerequisite: either GEOG 2200 or GEOG 2300, or permission of the Department.

Lectures three hours a week.

GEOG 3900 [0.5 credit] (formerly 45.390\*)

**Geographic Thought and Methodology**

Debate about the nature of geography and what geographers do; frameworks for understanding the discipline; debates within physical, environmental, and human geography and the connections among them.

Prerequisite: third-year Honours Geography standing.

Lectures two hours a week, discussion one hour a week.

GEOG 3905 [0.5 credit] (formerly 45.395\*)

**Selected World Regional Problems**

Geographical analysis of topical problem areas in the world community.

Prerequisite: third-year standing or permission of the Department.

Lectures three hours a week.

**• 4000-level courses are normally restricted to students with fourth-year Honours standing. However, students with third-year standing may take 4000-level courses provided they have the necessary prerequisites, a Geography CGPA of 6.50 or better, and permission of the Department.**

GEOG 4000 [0.5 credit] (formerly 45.400\*)

**Field Studies**

Field observation and methodology in a selected region; individual or group basis.

Prerequisite: permission of the Department.

Hours to be arranged.

GEOG 4003 [0.5 credit] (formerly 45.403\*)

**Remote Sensing of the Environment**

Advanced image enhancement; land cover classification for thematic mapping; biophysical modeling; applications in resources, environment, and urban mapping.

Prerequisites: GEOG 3002 and Honours standing; or permission of the Department.

Lectures two hours a week, laboratory two hours a week.

GEOG 4004 [0.5 credit] (formerly 45.404\*)

**Environmental Impact Assessment**

Principles, scope and purpose of environmental impact assessment, from conceptual and methodological points of view; range of environmental issues with an emphasis on primarily Canadian case studies.

Prerequisite: fourth-year Honours standing in Geography or Environmental Studies or Environmental Science, or permission of the Department.

Note: GEOG 3101 or GEOG 3306 is recommended.

Lectures and seminars three hours a week.

GEOG 4005 [0.5 credit] (formerly 45.405\*)

**Directed Studies in Geography**

Students pursue their interest in a selected theme in

geography on a tutorial basis with a member of the Department.

Precludes additional credit for GEOG 4001 and GEOG 4002 (either taken before 1998-99).

Prerequisites: fourth-year Honours standing in Geography and permission of the Department.

GEOG 4006 [0.5 credit] (formerly 45.406\*)

**Analytical and Computer Cartography**

Theoretical and practical approaches to analytical and computer cartography, with an emphasis on digital mapping algorithms using microcomputers.

Prerequisites: GEOG 3007 (or equivalent), and fourth-year Honours standing; or permission of the Department. Basic mathematical skills (linear algebra, geometry, and trigonometry) and knowledge of data processing are assumed.

Lectures and laboratory three hours a week.

GEOG 4008 [0.5 credit] (formerly 45.408\*)

**Advanced Topics in Geographic Information Systems**

Advanced methods and techniques in GIS applications including: positional and attribute error analysis, multiple criteria decision making, interpolation, elevation modeling and ortho-imaging, and spatial pattern measurement.

Prerequisites: Geography GEOG 3005 and GEOG 3006 and Honours standing in Geography.

Lectures two hours a week, laboratory two hours a week.

GEOG 4101 [0.5 credit] (formerly 45.411\*)

**Quaternary Geography**

Changes in the physical environment of the earth during the last two million years; methods of studying recent earth history; the last ice age in Canada. (Also listed as GEOL 4105.)

Prerequisites: GEOG 3105 or permission of the Department.

Note: GEOG 3102 is recommended.

Lectures three hours a week.

GEOG 4103 [0.5 credit] (formerly 45.413\*)

**Water Resources Engineering**

A quantitative analysis of natural water systems and the development of these systems as a resource. Components of the hydrologic cycle. Quantitative analysis of stream flow. Probability concepts in water resources. Reservoir design and operation. Availability of groundwater. Storm water management. (Also listed as ENVE 3003.)

Prerequisites: CIVE 3208 and MAAE 2300, or permission of the department.

Lectures three hours a week, problem analysis one hour a week.

GEOG 4108 [0.5 credit] (formerly 45.418\*)

**Permafrost**

Distribution, development, and degradation of permafrost in Canada; thermal and hydrologic regime of permafrost terrain; development of landforms in permafrost regions; geotechnical consideration in northern construction.

Prerequisite: GEOG 3108 or permission of the Department.

Lectures three hours a week.

GEOG 4109 [0.5 credit]

**Soils and the Environment**

The formation and development of soils, soil classification, soil fertility, soils and environmental concerns, land degradation.

Precludes additional credit for GEOG 3109.

Prerequisite: GEOG 3108 or permission of the Department.

Lectures three hours a week.

GEOG 4203 [0.5 credit] (formerly 45.423\*)

**Urban Revitalization**

Recent revitalization of inner cities from an internationally comparative perspective; residential, commercial and institutional dimensions of revitalization, with particular reference to waterfronts and to heritage conservation issues.

Prerequisites: GEOG 3200 and fourth-year Honours

Geography standing, or permission of the Department.

Seminar three hours a week; optional residential field week.

GEOG 4207 [0.5 credit] (formerly 45.427\*)

**Urban Development and Analysis**

The relationship between changes in urban development and geographic theory, emphasizing contemporary critical perspectives on selected urban issues.

Prerequisite: fourth-year Honours Geography standing or permission of the Department.

Seminar three hours a week.

GEOG 4208 [0.5 credit] (formerly 45.428\*)

**Geographical Analysis of Health Information**

Integration of theory and application through (1) extensive, quantitative methods of analyzing geographical data on disease and (2) intensive, qualitative methods of producing primary information on health, space, and place.

Prerequisites: GEOG 3003 and GEOG 3206 and fourth-year Honours standing in Geography or Environmental Studies, or permission of the Department.

Lecture two hours a week, laboratory two hours a week.

GEOG 4300 [0.5 credit] (formerly 45.430\*)

**Comparative Environmental Movements**

The emergence of contemporary, locally based, environmental movements in Canada, Africa, Asia, and Latin America. Case studies to analyze local environmental action in relation to the broader political economy and long term sustainability of land use.

Prerequisites: fourth-year Honours standing and GEOG 3209 or GEOG 3300 or permission of the Department.

Seminar three hours a week.

GEOG 4301 [0.5 credit] (formerly 45.431\*)

**Advanced Cultural Geography**

Cross-cultural thematic examination of territorial organization, territoriality, mental maps, geographies of the mind, and landscape impact of authority and ideology. Regional emphasis on Canada.

Prerequisite: GEOG 2300 or permission of the Department.

Seminar three hours a week.

GEOG 4303 [0.5 credit] (formerly 45.433\*)

**Urban Planning**

A systematic approach to urban planning; urban sprawl; data collection; forecasting; standards; space requirements; land use; zoning; transportation; land development; site selection; land capability; layout; evaluation; housing; urban renewal and new towns. (Also listed as CIVE 4303.)

Prerequisite: third-year registration, or permission of the Department.

Lectures three hours a week, problem analysis three hours alternate weeks.

GEOG 4304 [0.5 credit] (formerly 45.434\*)

**Transportation Engineering and Planning**

Transportation and the socio-economic environment; modal and intermodal systems and components; vehicle motion; human factors, system and facility design; traffic flow; capacity analysis; planning methodology; environmental impacts; evaluation methods. (Also listed as CIVE 3304.)

Prerequisite: third-year registration, or permission of the Department.

Lectures three hours a week, problem analysis three hours alternate weeks.

GEOG 4305 [0.5 credit] (formerly 45.435\*)

**Cultural/Historical Geography**

Methodological approaches in cultural and historical geography emphasizing the use of primary documents and cartographic and statistical methods in the study of Canada and Ontario.

Precludes additional credit for GEOG 5405.

Prerequisite: GEOG 2300 or GEOG 3305, or permission of the Department.

Seminar/lecture three hours a week.

GEOG 4400 [0.5 credit] (formerly 45.440\*)

**Environmental Geopolitics**

Environment and conflict in geopolitical perspective, ecological change and security policies of the industrial world, the geography of environmental threats, the political consequences and world order implications of environmental degradation and environmental refugees.

Prerequisites: fourth-year Honours standing and two of GEOG 2101, GEOG 2200, GEOG 3307, or permission of the Department.

Seminar three hours a week.

GEOG 4401 [0.5 credit] (formerly 45.441\*)

**Geographies of Globalization**

Theories of globalization in geographic perspective; local consequences of global processes, interconnections and patterns of social, economic, environmental, political and cultural change.

Prerequisites: fourth-year Honours standing, or permission of the Department.

Seminar three hours a week.

GEOG 4405 [0.5 credit] (formerly 45.445\*)

**Rural Land Use Analysis**

Rural land use issues from physical and socio-economic perspectives, contemporary methods for rural land use evaluation; rural land use policies.

Prerequisite: GEOG 3306 and fourth-year Honours standing, or permission of the Department.

Lectures and seminars three hours a week.

GEOG 4406 [0.5 credit] (formerly 45.446\*)

**Practicum in Geography I**

Experience in an employment environment through field placement. Observation and involvement in issues and research methods used by professional geographers.

May be taken for credit in addition to GEOG 4408.

Prerequisites: fourth-year Honours standing in Geography and permission of the Department.

Field placement one day a week.

GEOG 4407 [0.5 credit] (formerly 45.447\*)

**Canadian Agriculture**

Trends in farm organization and production; issues arising from farming's relationships to the physical resource base, land market pressures, government policies and regulations, and agribusiness and marketing organizations.

Prerequisites: GEOG 2505 or GEOG 3306 and fourth-year Honours standing, or permission of the Department.

Lectures and seminars three hours a week.

GEOG 4408 [0.5 credit] (formerly 45.448\*)

**Practicum in Geography II**

Experience in an employment environment through field placement. Observation and involvement in issues and research methods used by professional geographers. May be taken for credit in addition to GEOG 4406.

Prerequisites: fourth-year Honours standing in Geography and permission of the Department.

Field placement of one day a week.

GEOG 4600 [0.5 credit] (formerly 45.460\*)

**Post-Communist Eastern Europe**

Geographical dimensions of political and economic transition in the post-communist societies of Eastern Europe and the former USSR. Topics may include environmental degradation, resource management, population, quality of life, industrial restructuring and regional development, urban and rural changes, energy, transportation, and foreign trade.

Prerequisites: fourth-year Honours standing, GEOG 3600 or GEOG 3601 (taken before 1999-2000), or permission of the Department.

Lectures and seminars three hours a week.

GEOG 4904 [1.0 credit] (formerly 45.494)

**Honours Research Workshop and Tutorial**

Advanced training in research design, data collection and analysis, report writing and oral presentations in workshop and tutorial settings; undertaking of an individual research project and preparation of a major report on a selected topic

normally on the National Capital Region.

Precludes additional credit for GEOG 4908, and GEOG 4909.

Prerequisite: fourth-year Honours standing in Geography. Workshop/seminar/tutorial three hours per week.

GEOG 4906 [1.0 credit] (formerly 45.496)

**Honours Research Project**

Candidates for B.Sc. with Honours in Geography undertake a research project based on a laboratory or field problem. The project is supervised by a member of the department and a written report must be submitted. The candidate may be examined orally on the report.

Prerequisite: fourth-year Honours standing in Geography. Hours to be arranged.

GEOG 4909 [1.0 credit] (formerly 45.499)

**Honours Research Essay**

A student in the fourth year of B.A. (Honours) or Combined B.A. (Honours) in Geography may write an Honours essay or equivalent. Students work under an individual faculty adviser. The subject for research is decided upon in consultation with the supervisor.

Precludes additional credit for GEOG 4904 and GEOG 4908.

Prerequisites: fourth-year Honours standing in Geography, a Geography CGPA of 8.00 or better, an approved research topic, and permission of the Honours supervisor.

Hours to be arranged with faculty adviser.