

Department of Geography

Offered in English or French. See “Géographie” on French side of Calendar.

Faculty

Chair...

Emeritus Professors

Y.T. Toni, B.A. (Alexandria), Ph.D. (Durham)
O.W. Saarinen, M.A., (Western), Ph.D. (London)
J.R. Pitblado, M.A., Ph.D. (Toronto)

Full Professors

R. Etongué Mayer, D.E.F., L. ès L. (Yaoundé), M.Sc. (Sherbrooke), Ph.D. (Laval)
G.O. Tapper, B.A. (Florida Atlantic), M.A. (East Tennessee State), Ph.D. (U. Cal., Riverside)

Associate Professors

C. Bouchard, B.A., M.A., Ph.D. (Laval)
R.W. Dirszowsky, B.Sc., M.Sc., Ph.D. (Toronto)
S.P. Meyer, B.A., M.A., (Wilfrid Laurier), Ph.D. (Western)
J. Virchez, B.Sc. (ITESM), M.Sc., Ph.D. (Laval)

Assistant Professors

W. Crumplin, B.A. (Western), M.A., (Victoria), M.A. (Waterloo), Ph.D. (Queen's)
M. Soumahoro, L.ès.L, M.A., (Abidjan), Ph.D. (Laval)
A. Watelet, B.Sc., B.A., Ph.D. (Ottawa)
N. Yantzi, B.Sc., (Trent), M.A. (Queen's), Ph.D. (Queen's)

Technologist

L. Larivière, B.A. (Laurentian)

Staff/Personnel

Helen Lacko, B.A. (Laurentian), B.Ed. (Nipissing)

Admission Requirements

- one 4U English or French course
- five other 4U/M courses

See “Admissions homepage” for other requirements.

General Information

Geography students are advised to consult with the Chair of the department before selecting courses to ensure that their choices meet the language, science, humanities and geography requirements. The department's overall objective, in the 4-year program, is to provide balanced undergraduate instruction in the areas of analytical techniques, systematics, and regional studies. More specifically, it aims to provide students with a sound base for applied studies in the fields of regional resource development planning and urban planning, and an introduction to certain area studies.

Programs

Techniques courses

GEOG 2016 to 2027
GEOG 3036 to 3047
STAT 2126

Systematic courses

GEOG 2106 to 2216
GEOG 3106 to 3317

Regional courses

GEOG 2406 to 2617
GEOG 3497 to 3827

Bachelor of Arts (general) in Geography (3-year)

• Single Concentration

1st Year

GEOG 1026/7 (6 cr)
+ Electives (24 cr)

2nd & 3rd Years

Techniques and/or
Systematic courses (12 cr)
Regional courses (12 cr)
6 Credits GEOG elective (2000-3000)series
GEOG courses (6 cr)
+ Electives (30 cr)

• Combined Concentration

**30 credits required in each discipline,
GEOG requirements include:**

GEOG 1026/7
Techniques and/or
Systematic courses (12 cr)
Regional courses (12 cr)
+ 2nd concentration courses (30 cr)
+ electives (30 cr)

Bachelor of Arts in Geography (4-year)

- **Single specialization**

60 GEOG credits required

1st Year

GEOG 1026/7

+ courses from other disciplines (24 cr)

2nd & 3rd Years

Techniques courses (12 cr)

Systematic courses (12 cr)

Regional courses (12 cr)

+ Electives (24 cr)

4th Year

+ 4000-series GEOG courses (18 cr)

+ electives (12 cr)

- **Combined Specialization**

42 credits required in both disciplines,

GEOG requirements include:

GEOG 1026/7 (6 cr)

Techniques courses (6 cr)

Systematic courses (12 cr)

Regional courses (6 cr)

4000- series GEOG courses (12 cr)

+ 2nd specialization courses (42 cr)

+ Electives (36 cr)

Note: Students may include a maximum of 42 credits of 1000-series courses in their degree program.

Honours Diploma in Geography

The Honours Diploma Program has been developed for 3-year general B.A. graduates who wish to pursue further studies in Geography. Admission to the Honours Diploma Program requires the successful completion of a general B.A. in Geography, with at least 70% overall average in Geography courses required for the general B.A.

The student must complete a minimum of 30 credits in Geography. All programs must be approved by the Chair of the department. The student must fulfill the Honours B.A. requirements in terms of techniques, systematic, regional and 4000-level courses, with an overall average of at least 70%.

Certificate in Applied Geography

This program provides the student with a sound and general knowledge. The student develops skills allowing them to function in the field of quantitative methods, mapping interpretation of aerial photography, remote sensing as well as geographical information systems. (GIS)

The student must complete the listed 10 half courses (30 credits) and achieve at least an average of 70 percent.

Required courses:

GEOG 1026	GEOG 1027
GEOG 2016	GEOG 2017
STAT 2126	GEOG 2027
GEOG 3036	GEOG 3037
GEOG 4056	GEOG 4057

Honours Earth Science Program

The Department of Geography is involved within two environmental programs. We manage the entire Earth Science B.A. program, while we give course support to the Environmental Earth Science B.Sc. program. The Earth Sciences programs at Laurentian are unique in that each program combines a “core” of courses from: Geography, Biology and Geology (known as the Earth Science Department) that specifically address the environment and environmental problems. The programs offers the student a broader range of these environment or earth science subject material than is possible within existing specialist programs in Biology, Geography or Geology. The B.A. program is particularly designed for those students with an interest in the Earth Sciences and the Environment who do have or do not wish to obtain the specific B.A. or B.Sc. admission and graduation requirements of the Biology, Geography and Geology programs. For more information, please consult the Earth Science section of the Calendar, or contact the co-ordinator of the respective program.

Course Descriptions

GEOG 1026 E Introduction to Physical Geography

A geographical investigation of the natural environment and its links with humankind, and an introduction to environmental concepts and spatial systems. Focuses on the development of skills to describe and interpret environmental data. Lectures and practical assignments. (lec 3) cr 3

GEOG 1027 E Introduction to Human Geography

Provides a geographical appreciation of the various elements of the human landscape. Topics include: the evolution of regional urban contrasts, related planning strategies, and spatial inequities. Lectures and practical assignments. (lec 3) cr 3

GEOG 2016 E Introduction to Cartography

An introduction to the concepts, terminology and technologies involved in computer-assisted digital mapping. Basic concepts for understanding geographic information and mapping are emphasized. Lectures and laboratory work. (lec 3) cr 3

GEOG 2017 E Applied Cartography and Introduction to G.I.S.

Emphasizes the application of cartographic principles introduced in GEOG 2016. Issues unique to map creation and design using specialized information databases, such as Geographic Information Systems, are explored. Emphasis is placed on the integration of mapping and the analyses of geographic phenomena. Lectures and practical assignments. (lec 3) cr 3

GEOG 2027 E Quantitative Methods in Geography

This course considers applications of quantitative methods in the various subfields of geography. It is an extension of GEOG 2026 but focuses on multivariate analysis, including: multiple regression, principal components analysis, numerical classification, and discriminant analysis. A selected number of non-statistical, quantitative models will also be described. Department of Geography computer programs (as well as SPSS) will be employed throughout the course. Prerequisite: GEOG 2026 or an equivalent introductory Social Science quantitative methods course (see program requirements). (lec 3) cr 3

GEOG 2106 E Geomorphology I

Provides students with a fundamental understanding of what geomorphology means, the tools used by geomorphologists in understanding landform genesis and what impact understanding geomorphology has on the general population in terms of resource exploration and environmental management. These concepts are woven into the following topic areas: landscape form and structure; earth building and formation of rocks; gradation, weathering and mass movement; and fluvial and Karst Environments. Students may not retain credit for both GEOG 2105 and 2106. (lec 3) cr 3

GEOG 2107 E Geomorphology II

An extension of *Geomorphology I*. Four additional topic areas are covered: *Eolian Environments; Glaciated Landscapes; Periglacial Environments and The Global Ocean and Coastal/Shoreline Environments*. Prerequisite: GEOG 2106 or consent of the instructor. Students may not retain credit for both GEOG 2105 and 2107. (lec 3) cr 3

STAT 2126 E Introduction to Statistics

Provides an introduction to basic statistical concepts and techniques that are common to all disciplines in the Social Sciences. The principal topics include data collection and description, the characteristics and features of the normal probability distribution, the formulation and testing of hypotheses, linear correlation and regression analyses.

GEOG 2206 E Population Geography

A study of demographic characteristics, the socio-professional structure of the labour force and the essential differences between rural and urban populations. (lec 3) cr 3

GEOG 2207 E Migrations and Spatial Diffusion

An examination of the major phases of international migration and the impact of these population movements at various levels. The course also involves a study of rural exodus and the process of urbanization. (lec 3) cr 3

GEOG 2216 E Cultural Geography

An examination of the development and present territorial organization of human societies, with particular reference to value systems, technologies, ideologies, and acculturation processes. (lec 3) cr 3

GEOG 2406 E Geography of Canada: Regional Analysis

This course will investigate the various regions of this vast and diverse country. Emphasis will be placed on their environment, people, places, historical development, social and political processes, and settlement patterns. (lec 3) cr 3

(NOTE: GEOG2406E + GEOG2407E = GEOG2405F)

GEOG 2407 E Geography of Canada: Economic Structure

Provides a spatial analysis of economic activities in Canada. Focus is placed on sectors that are prevalent in the various regions of Canada and how they are responding to the world economic challenge. An assessment will follow to explain the presence of the economic activity and its significance to the regional and national economy. (lec 3) cr 3

(NOTE: GEOG2406E + GEOG2407E = GEOG2405F)

GEOG 2506 E The American Landscapes

The course covers the natural physical landscapes of the United States, and the evolution of American settlement. Lectures and practical work. (lec 3) cr 3

GEOG 2507 E United States Spatial Dynamics

The course covers the historical geography of the United States within the context of its political, economic, and cultural development. Lectures and practical work. (lec 3) cr 3

GEOG 2606 E World Regional Geography

The course presents an introduction to the geographic region: its creation, its evolution, and its functional structures. The course involves a comparative study of the different types of regions in relation to environmental characteristics, resource use, population dynamics and human activities. (lec 3) cr 3

GEOG 2617 E Geography of the Asian-Pacific Rim

A comparative study of major characteristics and problems of Asian-Pacific countries, with an emphasis on China and Japan. Analysis of cultural and historical processes, of contemporary spatial, human and economic patterns as well as of new relationships existing between these countries. Students cannot retain credit for both GEOG 2607 and 2617. (lec 3) cr 3

GEOG 2656 E The Mediterranean World - A Cultural Geography

From its ancient civilizations to its modern and perpetual changes the Mediterranean basin is studied as a set of recognizable regional units. Landscape patterns are used as a point of reference. Issues examined will include: urban tradition, man-made rural landscapes, the challenge of the environment and the inter-related facts which make up the Mediterranean's cultural geography. (lec 3) cr 3

GEOG 2707 E A Geography of Central and Eastern Europe

A study of a major shatter belt area of the world, with emphasis on the spatial impact of political and economic domination, in the case of some states, and the effects of a neutral or even independent role, in the case of others. These studies are in addition to a systematic investigation of the cultural and economic aspects of the human landscape. Several case studies will be undertaken. (lec 3) cr 3

GEOG 3036 E Air Photo Interpretation

Conventional aerial photography is studied in depth with particular emphasis on its application to geographic research. Studies involve the interpretation of geomorphic features, vegetation, soils and patterns of human occupancy. The examination of various geometric and physical characteristics of vertical air photos. Lectures and practical work. (lec 3) cr 3

GEOG 3037 E Remote Sensing of the Environment

This course is an interdisciplinary approach to remote sensing of the environment. Emphasis will be placed on applications to geographic research and applied studies in related disciplines. Imagery interpretation will involve the analysis of the spatial data collected by sensors on-board aircraft and spacecraft. Students will become familiar not only with conventional photographic imagery but also infra-red scanner data, SLAR, and various microwave systems. Lectures and practical work. Prerequisite: GEOG 3036 or consent of the department. (lec 3, exp) cr 3

GEOG 3046 E History and Methodology of Geography

This course involves a study of the historical and theoretical development of geography as a field of knowledge from ancient times to the modern period. Emphasis is placed on the methods of geographical research, forms of explanation, the development of ideas and the transmission of knowledge across linguistic divisions. (lec 3) cr 3

GEOG 3047 E Theory and Practice of Geography

Geography is a broad and rapidly evolving field. Consequently there exist many approaches towards its study. This course will investigate this diversity in approaches in studying geographic philosophies and the implications of their application for research methodology and study. (lec 3) cr 3

GEOG 3106 E Climatology

Designed to acquaint the student with the dynamics of the earth's atmospheric system and its regional expression. Both the physical properties and processes of the atmosphere as well as the distribution of weather and climate at micro- and macro-scales are considered. (lec 3) cr 3

GEOG 3107 E Applied Climatology

A study of the relationship between climate and human activity. Topics include: climatic classification, bio-climatology, solar energy, climate and agriculture, urban heat islands, climatic modification and change. (lec 3) cr 3

GEOG 3115 E Biogeography

This course will cover the study of dynamic responses of plant and animal distributions to physical factors such as climate and soils to human environmental factors. Emphasis will be placed on conservation studies. Lectures, field work and laboratory studies. (lec 3) cr 6

GEOG 3136 E Hydrology

This course will focus on the occurrence, circulation and geography of surface waters of the earth. It will present the processes of the hydrological cycle of the watershed scale, the water balance and stream flow, in relation with human activities. (lec 3) cr 3 Pre-requisite Geog 1026E

GEOG 3206 E Geographic Perspectives on Urban Systems

The course deals with the urbanization process and the aggregate characteristics of cities and their roles in the spatial organization of regions and national territories. Special treatment is given to the evolution of the North American urban system and related policy issues. (lec 3) cr 3

(NOTE: GEOG3206E + GEOG3207E = GEOG3205F)

GEOG 3207 E The Internal Structure of the City

The course analyzes the internal structure of the city from a land use perspective. Theories of land use and spatial behaviour are stressed which provide the student with an insight into the principles and processes that account for differentiation and change within the city. Urban issues linked to land use conflicts are also discussed. (lec 3) cr 3

(NOTE: GEOG2406E + GEOG2407E = GEOG2405F)

GEOG 3216 E Political Geography of the State

Spatial aspects of political power will be studied, with emphasis given to the internal relationships of a state. Theoretical models of political spatial interaction will be tested in case studies of particular states. (lec 3) cr 3

GEOG 3217 E Political Geography of International Relations

Geographical aspects of relations between states. Topics studied will include territorial claims, resource and commercial conflicts, and colonial or neo-colonial spatial impacts...Several global views, including geopolitical strategies, will be considered. (lec 3) cr 3

GEOG 3236 E A Historical Geography of Canada

Studies of change in the human use of Canada's space. Analyses of spatial relationships in the past patterns of settlement, - resource use, and organization of exchange. Selected parts of Canada are considered in greater detail. (lec 3) cr 3

GEOG 3237 E A Political Geography of Canada

Investigates the spatial aspects and implications of political systems in Canada. While emphasis of the study is on understanding the processes of internal integration, interactions between Canada and other states are also considered. (lec 3) cr 3

GEOG 3307 E Geomorphology of Northern Ontario

The course aims to define the major geomorphic landforms and associated depositional processes of northern Ontario, gaining an understanding of the economic and environmental impact of those landforms on the population of Ontario. Prerequisite: GEOG 2106 or consent of the instructor. (lec 3) cr 3

GEOG 3316 E The Spatial Organization of Economic Activity

The study of factors influencing the spatial distribution of economic activities. Special attention is given to industrial location, patterns of international trade, and resource use and conservation. (lec 3) cr 3

GEOG 3317 E Contemporary Issues in Economic Geography

A study of the impact of economic strategies on the distribution of economic activities. Emphasis is placed on the role of various institutions, state and private, which influence economic development. (lec 3) cr 3

GEOG 3496 E Geography of Northern Canada: Social and Political Perspectives

This course provides an analysis of the social and political geography of the Canadian North. Investigated are the people who inhabit the region, their interrelations, and relevant contemporary issues. (lec 3) cr 3

(NOTE: GEOG3496E + GEOG3497E = GEOG3495F)

GEOG 3497 E Geography of Northern Canada: Developmental Issues

Development in Northern regions is hampered by a harsh climate, heterogeneous cultures, peripheral location and fragile environment. This course will examine these factors and assess how Canada has responded to these constraints. Examples will also be drawn from other Nordic countries. (lec 3) cr 3

(NOTE: GEOG3496E + GEOG3497E = GEOG3495F)

GEOG 3606 E The European Union

This course examines European institutions and their development since 1958. It includes a study of the principal geographic regions and an analysis of the evolution of the demographic centres of gravity. Emphasis will be placed upon the diversity of socio-cultural spaces within the European Union. (lec 3) cr 3

GEOG 3607 E The Economic Activities of the European Union

Studies are made at the regional and national levels regarding active population, employment structures and standards of living. An analysis is given of the strengths and weaknesses of various sectors of European industry, and of the relative significance of the E.U. within the global economy. (lec 3) cr 3

GEOG 3646 E The Arab World

A systematic study of historical, political, economic and social changes of the Arab Middle East and North Africa. (lec 3) cr 3

GEOG 3647 E OPEC and OAPEC - A Comparative Oil Geography

Contemporary analytical approaches to the rise of the Organization of Petroleum Exporting Countries, the Organization of Arab Petroleum Exporting Countries, and other exporting countries selected to permit comparison of policies, national and regional interests, and policy implementation in relation to world economic and environmental interdependence. (lec 3) cr 3

GEOG 3826 E Mexico and Latin America: A Systematic Approach

Following an introduction to the social and economic factors of development in the Western World, the course focuses on the major hindrances and stimuli to development encountered in the Third World Countries. Emphasis will be placed on economic and urban disparities. (lec 3) cr 3

GEOG 3827 E Mexico and Latin America

Introduction to the physical and human aspects of Mexico and Latin America. Special emphasis will be given to demographic and economic problems as well as the study of the stages of development and orientations to growth. In-depth analysis of NAFTA and MERCOSUR. (lec 3) cr 3

GEOG 4045 E Climate and Global Change

Oriented towards developing a better understanding of global warming and environmental change. The cause and effects of global climate and climatic change will be addressed, particularly the issues associated with the impact of global warming as they relate to human activities on the planet. Emphasis will be given to assessing the impacts of climate change on Northern Ontario. Students will be expected to prepare a major research paper and seminar, selected in consultation with the professor.

(Prerequisites: Consent of the instructor and nominally a minimum of 6 credits among GEOG 2026/7 or BIOL 3327; and GEOG 3106/7 or BIOL 3047; or their equivalents). (lec/sem3) cr 6

GEOG 4056 E Geographic Information Systems (G.I.S.)

This is a lecture-lab course that covers the basic theory and character of geographical information systems (GIS). Issues that are examined will include: the generation of spatial databases using socio-economic and environmental data; advantages and disadvantages of raster and vector GIS models; and selected algorithms for decision making in a GIS environment. Prerequisites: Consent of the instructor and normally a minimum of 12 credits among GEOG 2016/7, 2026/7, 3036/7, or their equivalents. Lectures and practical work. (lec 3) cr 3

GEOG 4057 E Topics in GIS Applications

This is a lecture-seminar-lab course covering selected topics in the application of geographic information systems in the social and natural sciences. Students will undertake a major term project selected in consultation with the instructor. Prerequisites: Consent of the instructor and GEOG 4056. Lectures and practical work. (lec 3) cr 3

GEOG 4106 E Applied Geomorphology

This course deals with the application of geomorphic principles in environmental planning and management and the practical use of geomorphology for the solution of problems where humans wish to transform landforms or to use and change surficial processes. Particular attention is focused on the study of geomorphic processes that affect people, such as floods and landslides, and the utilization of geomorphic agents or products such as water, sand or gravel, as resources. Prerequisites: GEOG 2106,

and 2107 or 3307, or consent of the instructor. (lec 3) cr 3

GEOG 4107 E Land Resources and Their Evaluation

A systematic examination of the characteristics, distribution and land use of soils and related land resources. Special attention will be given to the evaluation of these resources (land capability analysis) for the purposes of rural land management. (lec 3) cr 3

GEOG 4116 E Human Activities and the Environment

A study of the interactions between human beings and the environment with the objective of developing an understanding of social and physical processes at stake. (lec. 3) cr 3

GEOG 4117 E Water Issues of the XXIst Century

This course addresses the most pressing issues regarding water around the world such as water quantity, water quality and access to drinking water. It will discuss processes of hydrological cycle as modified by climate and land-use changes. (lec 3) cr 3

GEOG 4216 E World Population Growth

The geographical application of theories of population growth in the developed and developing worlds. Special attention will be given to the critical assessment of such features as population explosion, population control, planning, policies, overpopulation, underpopulation, migration, and the implications of present population trends. (lec 3) cr 3

GEOG 4217 E Population and Development

An examination of the implications of population size, evolution, distribution, density and characteristics to specific objectives of regional planning, land use and location of industries. (lec 3) cr 3

GEOG 4226 E Urban Population Dynamics

Study of the changes affecting urban population characteristics such as fertility, mortality, sex ratio. The evolution of the spatial distribution of population. An examination of inter-urban and intra-urban movements. (lec 3) cr 3

GEOG 4227 E The Social and Cultural Geography of the City

Analysis of the main components of an urban population: ethnic divisions, religious denominations, socio-professional structures. Presentation of the various ways to approach the geographical concept of neighborhood. (lec 3) cr 3

GEOG 4805 E Natural Resource Development in Regional Planning

An examination of the objectives of regional planning and the planning strategies employed to assign uses of natural resources. The major emphasis will be on Canadian regional planning problems. (lec, exp, field trip) cr 6

GEOG 4816 E Urban Land Use Planning Theory

The course familiarizes the student with the scope of the geographer's interest in urban planning. While the topics covered concern primarily the spatial principles of urban land use planning, consideration is given to the social, economic, and political elements that shape the environment as well. Seminars and practical exercises comprise an essential part of the course. (lec 3) cr 3

GEOG 4817 E Urban Land Use Planning in Canada

The course reviews land use planning in urban Canada. The themes examined include the role of the Government of Canada in dealing with national problems of urban settlement, the involvement of the Province of Ontario with municipal land use planning, and a case study review of the planning process within the Regional Municipality of Sudbury. (lec 3) cr 3

GEOG 4985 E Directed Studies

An opportunity for students to do special studies in the field of geography. The work will be supervised by a faculty member who is qualified in the student's area of interest. Work load will normally involve periodic discussions and a major essay. cr 6

GEOG 4995 E Senior Seminar and Thesis

cr 6