

Department of Geography

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The Department

Chair of the Department:

M.F. Fox

Departmental Supervisor of Graduate Studies:

A.I. Wallace

The Department of Geography offers programs of study and research in human and physical geography leading to the degree of Master of Arts. Master of Science and doctoral studies in physical geography can be undertaken in cooperation with the Ottawa-Carleton Geoscience Centre. Doctoral studies in other fields of geography may, in special cases, be undertaken in cooperation with other departments.

Students are accepted into the graduate program based on the standard of previous academic work, research interests, letters of reference, and the availability of faculty to act as supervisors. Each student's program of study, as far as possible, is based on the interests of the individuals, although certain courses may be required. An advisory committee, consisting of the student's research supervisor and at least one other member of the faculty, is established to monitor progress and provide thesis research guidance.

Excellent research laboratory facilities exist for the geotechnical study of near surface processes, and the physics, chemistry and thermodynamics of earth materials, as well as for computer cartography and for remote sensing. These facilities are supported by a highly qualified full-time staff in laboratory instrumentation, cartography, and computing. There is a specialized Map Library in the geography building. The university's location in Canada's capital city offers students access to important federal resources, such as the National Library, the Public Archives of Canada, the Canada Centre for Remote Sensing, Statistics Canada, and the specialist libraries of many government departments.

Systematic interests of departmental members are applied to a variety of world regions, although stress is given to Canada (including northern studies) and the Third World (especially Africa). The main clusters of specialization within the department are the following:

Physical Geography and Geotechnical Science

Studies of natural processes close to the earth's surface and their geotechnical significance; climate-ground interaction; geocryology; chemical, physical and thermodynamic characteristics of soils and sediments; hydrology.

(C.R. Burn, A.S. Judge, Joyce Lundberg, M.W. Smith, J.K. Torrance, T.P. Wilkinson, P.J. Williams)

Resource Development

Identification and analysis of development processes; the interplay of environmental, demographic, social, gender, political, and economic variables in the spatial development of land resources, settlement systems, outdoor recreation, tourism, and natural resource-based industries; environmental impact assessment and environmental management; Canadian and Third World development is stressed. (M.J. Brklacich, John Clarke, M.F. Fox, A.F.D. Mackenzie, E.W. Manning, G.I. Ozornoy, M.W. Smith, D.R.F. Taylor, J.K. Torrance, A.I. Wallace, T.P. Wilkinson)

Cultural, Historical, and Political Geography

Rural and urban settlement history; ethnicity; territorial organization and the concepts of state, group politico-territorial identities, territoriality, and self-determination; role of territory in conflict situations; perceptions of environment and geographies of the mind; gender as a cultural variable; urban heritage conservation.

(John Clarke, V.A. Konrad, Suzanne Mackenzie, I.C. Taylor, John Tunbridge)

Social and Economic Geography

Geographical analyses of the social and economic organization of societies; area variations in social well-being; medical geography; provision of public and informal services in changing local and regional environments; implications of gender roles for environmental restructuring; industrial systems; philosophy of science and of geography.

(David Bennett, A.F.D. Mackenzie, Suzanne Mackenzie, G.I. Ozornoy, D.M. Ray, A.I. Wallace)

Computer Cartography and Remote Sensing

Development of applications in computer cartography and the use of remote sensing in geographical research. (G.F.P. Deecker, M.F. Fox, D.J. King, Andrew Rencz, D.R.F. Taylor, T.P. Wilkinson).

The opportunity for wider experience in cartography may be obtained through arrangements by which a student may take for credit at Carleton University one or more courses in cartography offered by the Department of Geography, Queen's University. The principal areas of focus are map design and history of cartography at Queen's, and applied aspects of computer-assisted cartography at Carleton. Students following the cooperative cartography program may register in either department, and will follow the normal regulations and requirements for their university of registration. When appropriate for students in the cooperative program, representatives from both universities may be members of a student's thesis examining board. Financial aid for transport between cities will be provided by the home department.

Qualifying-Year Program

Applicants with exceptional promise who have a general (pass) bachelor's degree, or who have substantially less than the honours B.A. in Geography may be admitted to a qualifying-year program. To be considered for admission into the master's program, qualifying-year students must attain at least an overall high honours standing in their qualifying-year geography courses. The general section of this calendar provides details about the regulations governing the qualifying year.

Master of Arts

Admission Requirements

The normal requirement for admission into the master's program is an honours B.A. or B.Sc. in Geography with at least high honours standing. In exceptional cases, pertinent work experience may be considered in support of an application to the Department. Applicants who have taken their undergraduate degree in the physical or natural sciences or engineering, as well as in physical geography, will be considered if their research interest coincides with those of the Department. Applicants in human geography may be accepted from related fields if their proposed research is closely related to faculty research experience. Students with academic deficiencies may be required to take additional courses.

Program Requirements

The M.A. in Geography normally takes from twelve to eighteen months, but field work may necessitate some extension. All master's students in geography are required to complete a minimum of five full courses or the equivalent, including an M.A. thesis

(equivalent to two full courses) which must be successfully defended at an oral examination. All students are required to have a reading knowledge of the language considered essential to their research.

In addition to the formal requirements it is required that M.A. students will normally attend a Graduate Field Camp and the Departmental Seminar series.

Graduate Courses*

In addition to the selection of courses offered by the department, graduate students in geography are encouraged to consider, in partial fulfilment of their degree requirements, appropriate courses offered in such disciplines as biology, chemistry, economics, engineering, geology, history, international affairs, physics, political science, and sociology.

Courses at the University of Ottawa may also be taken for credit in a Carleton M.A. program; permission of the departments in both universities is required.

The following courses, normally offered annually, are tentatively scheduled for 1993-94:

- Geography 45.500F1

Approaches to Geographical Enquiry

A review of the major philosophical perspectives shaping research and explanation by geographers. Particular attention is paid to interpretations of social structure and human action, the nature of the biophysical universe, and the interaction between human beings and their environments.

D.B. Bennett.

- Geography 45.505W1

Global Environmental Change: Human Implications
The nature of contemporary changes in global environmental systems and their significance for society, the economy and international relations. Phenomena such as climatic warming, deforestation, and the environmental pressures of urbanization and intensive agriculture are analyzed in terms of their regionally differentiated impacts and challenges for societal adaptation.

(Also offered as International Affairs 46.571)

A.I. Wallace.

- Geography 45.517F1, W1, S1

Field Study and Methodological Research

Field acquisition and analysis of geographic material; supervised field observations and methodology.

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* F,W,S indicates term of offering. Courses offered in the fall *and* winter will be followed by T.

The number following the letter indicates the credit weight of the course: 1 denotes a half-course credit, 2 denotes a full-course credit, etc.

rangement.)

Coordinator: Supervisor of graduate studies.

- Geography 45.520W1

Issues in Development in Africa

Analysis of structures and processes of political, social and economic change in intertropical Africa at scales ranging from the intrahousehold and local community to the state and international system. An objective is to integrate gender and the environment into analyses which draw on theories of political economy.

(Also offered as International Affairs 46.563)

- Geography 45.532F1

Soil Thermal and Hydrologic Properties

Instrumental techniques for investigation of hydrological and thermal processes near the earth's surface, laboratory instrumentation, and analysis of laboratory and field procedures in geotechnical science. (Alternates with Geography 45.530)

- Geography 45.533W1

Periglacial Geomorphology

Permafrost, its distribution and significance, seasonal ground freezing, ground thermal regime, physical, thermodynamic, and geotechnical properties of freezing and thawing soils, terrain features ascribable to frost action, and solifluction and patterned ground. P.J. Williams.

- Geography 45.534F1

Aspects of Clay Mineralogy and Soil Chemistry

The role of clay minerals in soils will be considered from a geotechnical and/or biological perspective. J.K. Torrance.

- Geography 45.537W1

Soil Resources

The properties of soils, development, classification, productive potential, and management problems of the world's soils. Primary emphasis will be agricultural, but environmental and geotechnical aspects will be considered. J.K. Torrance.

- Geography 45.540F1

Territory and Territoriality

Evolution of the Western meaning of territory is examined against contrasting contemporary concepts in the Third World, especially Africa. Significance of territory and territoriality: their impact on restructuring of political space, territorial claims, self-determination, conflict, and processes of development.

(Also offered as International Affairs 46.542)

- Geography 45.541F1

Society and Space

Analysis of geographer's contributions to contemporary social theory and of the geographical significance of theoretical debates in related fields.

Members of the faculty.

- Geography 45.542F1, W1

Selected Concepts in Social Geography

Theme to be announced.

- Geography 45.543F1

Selected Concepts in Cultural Geography

Investigation of a substantive theme in cultural geography.

Theme to be announced.

- Geography 45.544F1

Gender and Environments

This course examines the relation between gender role change and the creation and use of environments. Changes in people's activities, in the first and third worlds, are assessed in the context of feminist analyses. Conceptual and methodological skills for gender-sensitive research are developed. Subsequent directed field experience may be achieved by taking 45.517.

A.F.D. Mackenzie.

- Geography 45.545W1

Problems in Historical Geography

Philosophical and methodological approaches in geography, history, and historical geography, emphasizing the use of primary documents, model building and statistical methods as they relate to the historical geography of Canada.

John Clarke.

- Geography 45.550F1

Spatial Dynamics of Urban and Regional Change

A review of recent theoretical and methodological debate in this field and analysis of the changing geography of production, employment and social consumption in advanced economies. Policy issues will be considered.

G.I. Ozornoy.

- Geography 45.555W1

Tourism and International Development

The nature and effect of tourist development in various parts of the world, and the role of tourism in developed and developing countries.

- Geography 45.558W1

Agribusiness North and South

Analysis of the transformation of agriculture into an integrated multi-sectoral food production system and of its theoretical implications. Focus on the growth

and strategies of agribusi-

ness institutions in advanced industrial societies and of their penetration into, and impact upon, Third World economies.

(Also offered as International Affairs 46.534)

- Geography 45.570W1
Problems of Development in Arctic and Subarctic Environments
Research seminar on specific problems in Canada's northland. Experience from other parts of the world will be incorporated when appropriate.

- Geography 45.572W1
Issues in Canadian Resource Development
The economic, environmental and social challenges facing Canadian resource-based industries and the communities they support. Focus on the agricultural, energy, forest and mineral sectors. The global and national contexts of the political economy of production, marketing and resource management are reviewed.

- Geography 45.579F1
Research and Development in Outdoor Recreational Geography
Developments and research in Canadian recreational land use; leisure time trends and recreational land use patterns, supply and user preferences, impacts and conflicts, wilderness recreation, landscape classification, and park system planning and management.

- Geography 45.580W1
Spatial Information Systems and Computer Cartography
The concepts and problems involved with spatial information systems, especially those with a mapping component.

- Geography 45.583F1, W1 or S1
Remote Sensing and Image Analysis
Radiometric, geometric and resolution characteristics of remotely sensed data, image processing algorithms, analysis of spectral, textural, and contextual image information, applications to vegetation mapping and environmental analysis.

- Geography 45.584F1, W1 or S1
Introduction to Geographic Information Systems
Introduction to geographical application of GIS for students with no previous experience. Includes benefits and limitations of GIS, data formats and structures, input/output capabilities, analysis functions, and applications.

- Geography 45.590F1, W1, S1
Graduate Tutorial
Tutorial, directed reading or research, offered on an individual basis, to meet specific program needs; may be

taken in one of the areas of specialization of the department.

Coordinator: Supervisor of graduate studies.

- Geography 45.599F4, W4, S4

M.A. Thesis

Thesis supervision will be given in all areas of specialization of the department, as listed in the calendar section identifying departmental specialization.

Coordinator: Supervisor of graduate studies.

Courses Not Offered in 1993-94

45.530 Soil Thermal and Hydrologic Regimes

45.581 Seminar in Map Design

45.582 Seminar in Historical Cartography