

GEOGRAPHY AND PLANNING

Courses

NOTE: All courses offered in the Department of Geography and Planning, except GPHY 801 and GPHY 857 are of one term in length (3.0 credit units). GPHY 801 and GPHY 857 are 3.0 credit unit courses that run through both Fall and Winter terms. The Department of Geography and Planning usually offers approximately 10 courses in any one academic year. Detailed lists are printed for graduate students by the Department in June of each year for the following academic year.

GPHY 801 Conceptual and Methodological Basis of Geography

A discussion of the major concepts, methodology, and research traditions of geography and the relationship of the discipline to the theory and methods of the natural sciences and of the social sciences. Full year course, 3.0 credit units.

GPHY 818 Seminar Course in Landscape Ecology

Landscape ecology emphasizes the interaction between spatial pattern and ecological processes. This seminar course will examine the theory and practice of landscape ecology, and explore how composition and spatial patterning of landscapes affects ecological processes. Topics include: theoretical aspects of scaling, methods of quantifying landscape structure, and the effects of landscape structure and temporal dynamics on ecosystem functions such as succession, movement of biota, and fluxes of nutrients, energy, and trace gases all in the context of Earth System Science. Three term-hours. Not offered 2024-25.

GPHY 819 Systems Modelling

Research in Geography and Planning, and many other disciplines, often involves measuring and understanding the complex interaction of a variety of processes in both natural (e.g. a forest) and human-dominated (e.g. a city) systems.

This course provides students with the skills and tools necessary to develop, analyze, and test simulation models of complex systems containing multiple interacting processes.

These models are useful for synthesizing information, testing hypotheses, and guiding the development of research questions and policy. Three term-hours. Winter.

GPHY 823 Environmental Biogeochemistry

This course explores the impact of climatic change and anthropogenic activities on biogeochemical processes. Emphasis is placed on understanding how the resulting changes in atmospheric chemistry, the cryosphere, land use, geomorphology, and hydrological processes alter the biogeochemical cycling of Carbon, Nitrogen, and Sulphur,

and selected contaminants in terrestrial and aquatic systems. Three term-hours. Not offered 2024-25.

GPHY 824 Processes in Northern Regions

An advanced investigation of the current state of knowledge of processes related to the physical environment in northern settings, with the emphasis on permafrost, water and landscape interactions. Themes will include: climate and permafrost dynamics, periglacial geomorphology, hydrology, limnology. Three term-hours. Not offered 2024-25.

GPHY 836 Critical Methods of Inquiry

Through readings, dialogue, and practice, this course ponders how qualitative, participatory, and Indigenous modes of inquiry open up possibilities for research by confronting the socio-political-historical power relations of knowledge production, studying the how and why of everyday lived experiences and the structures that shape/are shaped by them. Offered jointly with EPID 836. Three term hours. Winter.

EXCLUSION: EPID 836

GPHY 841 Measurement in Climatology

The measurement of Essential Climate Variables is examined within the context of the global climate system. Students gain hands-on experience with automatic weather stations, and are responsible for the design, programming, and deployment of a station near Kingston. Students will be introduced to 'R', an open-source language, to support the statistical analysis, modelling, and visualization of data. Field Trip Fee: \$75-\$100. Three term-hours. Fall.

GPHY 842 Remote Sensing of Environment

This course examines methods and techniques for collecting, processing and analysing remote sensing data. An emphasis will be placed on how these methods are applied to address earth and environmental issues across a range of spatial scales. Special emphasis will be placed on airborne (including UAVs) and satellite sensors operating in the visible, infrared and microwave regions of the spectrum. Three term hours. Not offered 2024-25.

GPHY 845 Spatial Data Measurement and Collection

This course examines the application of one or more geomatics techniques to problems in earth measurement. Topics may include Total Station Surveying, Satellite Positioning, Aerial Photography, Photogrammetry, LiDAR, methods of field data collection, and deformation monitoring. Specific applications may be drawn from fields such as archaeology, architecture, geomorphology, and regional mapping. Three term hours. Fall.

GPHY 849 Seminar in Geographic Information Science



The goal of this course is to provide an in-depth discussion on topics related to geographic information science and explore innovative GIS applications. Topics may include some, or all of the following: (i) GIS database models and structures, design, and implementation, (ii) data visualization, generalization, and representation, (iii) data mining, (iv) cognition, (v) spatial analysis, (vi) internet mapping, (vii) uncertainty and error analysis, and (viii) societal issues. Three term-hours. Not offered 2024-25.

GPHY 854 Approaches to Data in Geographic Enquiry

A survey and assessment of the methods of acquisition, editing, management, organization, retrieval and display of different types of data used in research in geography. Emphasis on data organization and management in both mainframe and microcomputing environments. Three term-hours. Not offered 2024-25.

GPHY 855 Spatial Analysis

A review of descriptive and inferential statistics and quantitative methods appropriate for the description and analysis of spatial distribution and processes. Topics include point pattern analysis, measures of spatial association, classification, analysis of spatial and temporal data series and simulation methods in spatial analysis. Applications will focus on population and diffusion processes. Three term-hours. Winter.

GPHY 857 Geography Research Seminar

This is a seminar course required of all graduate students in the M.A. and M.Sc. programs in geography, in addition to their standard course load. The objective of this course is to introduce Master's students to a range of research approaches in the discipline of geography. The course also provides an opportunity for professional development and for the development of a Master's thesis proposal. Full year, 3.0 credit units.

GPHY 860 Anti-Colonial Urbanism

This course examines the colonial and anti-colonial processes that shape urbanization and city life. It analyzes systems of racialization, capitalism, heteronormativity, and colonialism, and focuses on practices of resistance. The course considers cities in both the North and South and centres the work of racialized and Indigenous scholars. PREREQUISITE: enrollment in a GPPL graduate program or permission of the instructor. Not offered 2024-25.

GPHY 868 Geographical Theory of Place and Space

This course explores the meaning of two of Geography's most fundamental concepts: place and space. It will look at diverse geographic approaches to these concepts from a variety of epistemological standpoints, consider their implications for research, and trace how geographers and

other social scientists and artists have incorporated a critical approach to place and space into their work. Three term-hours. Fall

GPHY 870 Historical and Cultural Issues in Fieldwork

This course explores the histories and cultural meanings of fieldwork. Geographical fieldwork is considered historically along with conceptions of the "field" in allied disciplines such as ecology and anthropology. Constructions of the "field" are addressed in terms of empire, nationalism, pedagogy, the lab-field border, and in relations to its role as a gendered and affective space of knowledge and activity. Three term hours. Not offered 2024-25.

GPHY 875 Seminar in Historical Geography

A lecture and seminar course in which developments in the field of historical geography are examined, assessed and placed in a disciplinary and interdisciplinary context. Three term-hours. Not offered 2024-25.

GPHY 880 The Geography of Energy

Historical, current and projected distribution of energy production and use in Canada. Topics include the development of our total primary energy supply, the rise of renewable energy sources, and future options for the development of Canada's energy resources, as linked to our societal needs. Three term-hours. Winter.

GPHY 884 Economies, Politics and Space

This seminar examines economic spaces as not only sites of production, exchange, and circulation but also as shaped by sociopolitical struggles over economic futures, the politics of place, and daily life. This will be accomplished through the discussion of key political economic texts and of current debates in the field of economic geography. Three term hours. Winter.

GPHY 886 The Political Economy of Urbanization

This seminar introduces political economic methods of understanding processes of urbanization as well as current debates within the fields of urban geography and urban planning. Contemporary trends in urban development are analyzed using different critical theoretical toolkits such as Marxism, racial capitalism, and feminist geography. Three term hours. Not offered 2024-25.

GPHY 889 The Geography of Citizenship

An examination of recent changes in the Canadian population and the social/spatial negotiation of citizenship. As Canadian society becomes more diverse, new concepts of citizenship and new developments in human rights provision counter historic forms of oppression ('race', class, gender), to result in changes that are mediated by public policy initiatives, citizenship movements, and the reorganization of capital. Key concepts: citizenship, multiculturalism, migration,

racialization, gender, transnationalism, globalization, democracy. Three term-hours. Not offered 2024-25.

GPHY 890 Advanced Studies in Physical Geography

Selected advanced studies in earth system science. Normally, this course will take the form of a reading course in the area of the instructor's expertise. Three term-hours.

GPHY 891 Special Topics Physical Geography

Selected specialized topics in Physical Geography. Normally, this course will be a special course taught by a visiting instructor, or used to explore new, more specialized course topics in Physical Geography. Three term-hours.

GPHY 893 Advanced Studies in Human Geography

Selected advanced studies in various fields of Human Geography. Normally, this course will take the form of a reading course in the area of the instructor's expertise. Three term-hours. Fall.

GPHY 894 Special Topics in Human Geography

Selected specialized topics in Human Geography. Normally, this course will be a special course taught by a visiting professor, or used to explore new, more specialized course topics in Human Geography. Three term-hours. Not offered 2024-25.

GPHY 899 Master's Thesis Research

GPHY 999 Ph.D. Thesis Research