

GEO Geography

GEO 130 EARTH'S PHYSICAL ENVIRONMENT. (3)

A course exploring the fundamental characteristics of earth's physical environment. Emphasis is placed on identifying interrelationships between atmospheric processes involving energy, pressure, and moisture, weather and climate, and terrestrial processes of vegetative biomes, soils, and landscape formation and change. Fulfills elementary certification requirements in education, and USP cross-disciplinary requirement.

GEO 152 REGIONAL GEOGRAPHY OF THE WORLD. (3)

A geographical study of the world by regions with a focus on the world's physical and human landscapes. Emphasis on how regions are connected to each other. Also how each region is affected by, and affects, global issues such as economic restructuring, food production, and environmental change, will be examined. Fulfills elementary certification requirement for Education and USP disciplinary social science requirement.

GEO 160 LANDS AND PEOPLES OF THE NON-WESTERN WORLD. (3)

The geographic study of the conceptual and historical definition of regions of the world as "Non-Western." Global patterns of social, cultural, economic, and political difference between the West and Non-West as well as the processes key to the making of the Non-Western world (such as colonialism and imperialism) are discussed. In addition, selected current issues of significance to peoples in the Non-Western world, such as sustainable development, environment, human rights, and gender relations, are considered. Fulfills USP Cross-Cultural requirement.

GEO 172 HUMAN GEOGRAPHY. (3)

A study of the spatial distributions of significant elements of human occupancy of the earth's surface, including basic concepts of diffusion, population, migration, settlement forms, land utilization, impact of technology on human occupancy of the earth. (Fulfills elementary certification requirement for Education and University Studies requirement.)

#GEO 200 CONCEPTS AND METHODOLOGY IN GEOGRAPHY. (3)

Introduces students to geographic perspective, theories, research and methodologies. Applied quantitative and qualitative approaches to geographic research are reviewed and examples from current literature presented and discussed. Prereq: GEO 130, GEO 172.

GEO 210 POLLUTION, HAZARDS, AND ENVIRONMENTAL MANAGEMENT. (3)

An introduction to environmental systems such as weather and climate, vegetation, land forms and soils, and how the quality of these systems is modified by human use. Resource issues discussed include: atmospheric pollution and global warming; groundwater, flooding, and flood plain management; volcanic activity and earthquakes; and biospheric processes associated with deforestation and lake eutrophication. Case studies based upon important environmental problems illustrate how human activity and environmental systems interrelate. Fulfills USP Cross-Disciplinary requirement.

GEO 222 CITIES OF THE WORLD. (3)

Focuses on the historical development, contemporary character, and alternative futures of cities in both developing and developed regions. The spatial, social, economic, and political processes of major world cities are studied and contemporary urban problems are discussed. Fulfills USP disciplinary social science requirement.

GEO 240 GEOGRAPHY AND GENDER. (3)

Adopts a geographic approach to the study of gender relations. The role of space and place in shaping the diversity of gender relations throughout the world will be considered. Through case studies the importance of gender relations in understanding a variety of issues will be stressed. Such issues include: the design and use of urban and rural environments; "Third World" development; regional economic restructuring; changing political geographies; and migration.

GEO 251 WEATHER AND CLIMATE. (3)

A survey of the atmospheric controls associated with local, regional, and global weather and climate variability. Includes fundamental coverage of the physics and chemistry of energy, gasses, pressure and moisture, with a goal of promoting understanding of general weather analysis and forecasting, severe storms, atmospheric pollution, descriptive climatology, and global climate change. Prereq: GEO 130 or consent of instructor.

GEO 260 THIRD WORLD DEVELOPMENT. (3)

The course focuses on characteristics of developing countries as well as solution strategies to development problems and conditions. Cultural distinctions, traditions, and institutions are recognized as keys to development condition and progress. Selected theories show how cultural variations in language and religion may be used to explain development. Numerous case studies are discussed, including Indonesia, China, India, Brazil, Kenya, and Zimbabwe.

GEO 285 INTRODUCTION TO PLANNING. (3)

An introduction to the history, purpose, and objectives of planning with emphasis on urban and regional planning, planning processes, techniques, and legislation.

***GEO 300 GEOGRAPHIC RESEARCH. (3)**

Provides a detailed examination and discussion of the methods of initiating and executing research projects in human or physical geography. Includes identification of geographic dimensions of research topics, theoretical/conceptual frameworks, conduct of literature reviews, research designs, data collection/analysis and presentation. Prereq: GEO 200.

GEO 305 ELEMENTS OF CARTOGRAPHY. (3)

Fundamental training in map drafting, compilation, symbolization, scales, projections, and map reproduction, including emphasis on the conceptual planning and designing of maps and graphs as a medium for communication.

GEO 309 DIGITAL GEOGRAPHIC DATA: SOURCES, CHARACTERISTICS, PROBLEMS, AND USES. (3)

Introduction to Geographic Information Systems and Science. This course introduces students to the use of geographic information systems and their basic principles. Topics addressed include data collection, processing and output. Students will learn about types of geographic information and data: sources, constraints, and uses; browsing and analyzing geographic information on the world wide web; collection of spatial data using global positioning systems (GPS) and other technologies.

**GEO 310 QUANTITATIVE TECHNIQUES
IN GEOGRAPHY. (3)**

The application of spatial techniques geographers use to collect, sample, map, and analyze data in human and physical geography. Students will be introduced to automated data processing.

**GEO 320 GEOGRAPHY OF THE UNITED
STATES AND CANADA. (3)**

A systematic review of the physical context, economic, historic, and cultural diversity that distinguish U.S. and Canadian regions. Topical emphasis on the geographic aspects of regional problems. Prereq: GEO 130 or 152 or 172, or consent of instructor.

**GEO 321 LAND, PEOPLE, AND
DEVELOPMENT IN APPALACHIA. (3)**

Major themes revolve around regional diversity and regional development. Major topics examined include physical environmental context, historical development, and economic and population geography. The study region includes the upland areas between southern New York State and central Alabama. Prereq: GEO 130, 152 or 172, or consent of instructor.

GEO 322 GEOGRAPHY OF KENTUCKY. (3)

An examination of the cultural, economic, political, and environmental diversity of Kentucky. In addition to studying the state's historical evolution, emphasis will be placed on contemporary problems facing the state. Kentucky's regional, national, and international contexts are discussed. Prereq: GEO 130, 152, 160, or 172.

**GEO 324 GEOGRAPHY OF CENTRAL AND
SOUTH AMERICA AND THE CARIBBEAN. (3)**

A study of the diversity of physical environments and human societies. The various historical geographies (pre-Columbian and after) of the region are presented as essential to an understanding of contemporary geographical patterns and processes in transport, agricultural, industry and mining, urbanization, and population. Throughout the course case-studies are presented and students are guided as they develop their own case studies. Prereq: GEO 152 or 160 or 172.

GEO 326 GEOGRAPHY OF EUROPE. (3)

This course explores the physical, cultural, and political geography of the European continent. Diversity of populations and physical landscapes is stressed. The geographic context for current events that are changing the face of Europe are presented. Prereq: GEO 152 or 172.

**GEO 328 GEOGRAPHY OF THE MIDDLE EAST
AND NORTH AFRICA. (3)**

A comprehensive regional overview, emphasizing cultural adaptation to desert environments. The interrelationships among religions, cultures, and the physical environment will be examined, along with the region's position and influence in the global system. Prereq: GEO 152, GEO 160, GEO 172, or consent of instructor. (Same as AAS 328.)

**GEO 329 GEOGRAPHY OF
THE FORMER SOVIET UNION. (3)**

A study of this region's diverse physical and human landscapes, emphasizing the historical and contemporary interlinkages between the various states. Contemporary problems of the post-Soviet era (such as environmental degradation, economic and regional restructuring, or the international position of the region) will be studied from a geographical perspective. Prereq: GEO 152, 160, or 172.

GEO 330 GEOGRAPHY OF SOUTH ASIA. (3)

A study of the human, economic, and environmental aspects of India, Pakistan, Bangladesh, Himalayan Nepal and Bhutan, and Sri Lanka. Topics include basic physical and cultural regionalisms, land use and population problems, and patterns of economic development involving urbanization, resources, and industrialization. Prereq: GEO 152 or 160 or 172.

GEO 332 GEOGRAPHY OF SOUTHEAST ASIA. (3)

A study of the cultural, economic, and political patterns and processes in mainland and insular Southeast Asia. Major themes examined are how the region's diverse physical geography, uneven natural resource base, cultural diversity, and colonial heritage provide a background to understanding contemporary development. Prereq: GEO 152 or GEO 160 or GEO 172 or consent of instructor.

GEO 333 GEOGRAPHY OF EAST ASIA. (3)

Provides an understanding of the life and landscapes in East Asian nations, with special focus on China and Japan. Emphasis is placed on contemporary issues of sustainable development, environmental management, minority groups, human rights and gender relations. Prereq: GEO 152, GEO 160, GEO 172 or consent of instructor.

**GEO 334 ENVIRONMENT, SOCIETY
AND ECONOMY OF JAPAN. (3)**

This course examines some of the major aspects of the society, culture, and economy of Japan. It discusses Japan's human and natural environments; natural hazards and disasters; cultural history and geography; economic and technological developments, their prospects and potentials; challenges to the management of environment and its resources; and Japan's role in global economy. (Same as JPN 334.)

GEO 336 GEOGRAPHY OF SUB-SAHARAN AFRICA. (3)

This course focuses on the cultural and environmental geographies of the subcontinent, rural landscapes and cultures and environmental problems, the historical geography of precolonial and colonial Africa, and the social geography of contemporary economic development. Prereq: GEO 130 and 152, 160, or 172. (Same as AAS 336.)

GEO 351 PHYSICAL LANDSCAPES. (3)

A study of earth surface processes and land forms. The focus is on the analysis and interpretation of earth surface features and topography in terms of process-response mechanisms, and on an understanding of the fundamental physical, chemical, biological, and human processes which create and modify landscapes. The course emphasizes the dynamic nature of land forms and Landscapes, and the interrelationships between land forms and hydrology, climate, soils, and the biosphere. Prereq: GEO 130, or consent of instructor.

GEO 365 SPECIAL TOPICS IN REGIONAL GEOGRAPHY (Subtitle required). (3)

Offers coverage of world regions not usually covered in other geography courses, or in-depth examinations of specific subregions. Topics covered include: elements of climate and physical landscapes; political and economic systems and their historical development and dynamics; social and cultural processes and landscapes. May be repeated to a maximum of six credit hours under different subtitles. Prereq: Any 100-level geography course or consent of instructor.

GEO 406G FIELD STUDIES (Subtitle required). (1-9)

Field-based, regionally specific study of selected topics in cultural, environmental, political, social, urban, or economic geography. May be repeated to a maximum of 18 credits with change in field site. Prereq: Consent of instructor.

GEO 409G GEOGRAPHIC INFORMATION SYSTEMS AND SCIENCE: FUNDAMENTALS. (3)

Investigation of geographic information systems (GIS) and science (GIScience). Including theory and applications areas. A major portion of the course will be based on use of a current widely-used GIS computer software system. Considered will be aspects of geographic data entry and editing, spatial analysis, and map development and display. Relationship of GIS to the Global Positioning System (GPS) and satellite generated data will be addressed. Prereq: GEO 309.

GEO 415 MAP INTERPRETATION. (3)

An introduction to reading and interpreting maps. Special attention given to the study of physical and cultural geography as portrayed on large scale topographic maps. Emphasis on the relationship between the environmental setting and human activities, surveys and boundaries, transportation, urban and rural settlement and land use, and place names. Prereq: GEO 130 or 172 or consent of instructor.

GEO 420G URBAN AND REGIONAL PLANNING. (3)

An analysis of urban and regional planning with emphasis on the contemporary urban and regional planning activities. Prereq: GEO 285 or consent of instructor.

GEO 430G PHYSICAL GEOGRAPHY FOR TEACHERS.(3)

The basic content of this course is quite similar to GEO 130 Physical Geography, with emphasis on atmospheric processes of weather and climate, and terrestrial processes of landscape formation and alteration. The human element, in terms of impacts on the environment and the converse impact through pollution and natural hazards, presents a common theme throughout the class. The primary focus in this course, however, is in developing effective teaching techniques for levels K-12 by

fostering an understanding of material, a knowledge of resource materials, and experience in applying physical geography to situations outside the classroom. Open to senior education majors and practicing instructors. Lecture, ten hours per week for four weeks.

GEO 441G FLUVIAL FORMS AND PROCESSES. (3)

An examination of erosion, deposition, and sediment transport processes associated with flowing water, landforms associated with fluvial processes, and landscape evolution in areas dominated by fluvial dissection and deposition. Field trips may be required. Prereq: GEO 351 or GLY 341.

GEO 452G WORLD GEOGRAPHY FOR TEACHERS. (3)

Approaches to teaching geographic themes and concepts within the context of the world's major regions and countries in grade levels K-12. Addresses those issues and problems that affect world regions in the context of the following broad themes: location, place, movement, regions, and human-environment interactions. Among those topics discussed are the use and importance of maps and related resource materials in instruction, presentation of themes at different grade levels, and identification and utilization of a broad range of reference materials for student and teacher use. Lecture, ten hours per week for four weeks.

GEO 455 ECONOMIC GEOGRAPHY. (3)

An examination of the geography of the capitalist global economy as it has developed unevenly. Emphasis will be placed on contemporary issues (such as industrial restructuring), and specific regions (such as Kentucky). Competing theories (classical, neoclassical, and marxian) aimed at explaining these patterns and processes are discussed and applied. Prereq: GEO 152, 160, or 172.

GEO 460 URBAN GEOGRAPHY. (3)

Examines the relationship between urbanization and the larger social and economic contexts within which city growth occurs. Surveys a range of theoretical perspectives on the internal socio-economic structure and built environment of cities, including the contributions by Chicago School, neoclassical, marxist, and postmodern theorists. Emphasis also placed on relevant environmental, social, and political problems of cities. Primary focus is on North American cities, but includes cross-cultural comparisons. Prereq: GEO 152, 160, 172, or 222, or consent of instructor.

GEO 465 SPECIAL TOPICS IN HUMAN GEOGRAPHY (Subtitle required). (3)

Offers coverage of issues and themes not covered in other geography courses, or in-depth examinations of specific issues and themes. Topics covered will commonly address emerging national and global issues of both general and scholarly interest. May be repeated for a maximum of six credit hours (under different subtitles). Prereq: Any 100-level geography course or consent of instructor.

GEO 475G MEDICAL GEOGRAPHY. (3)

An examination of the basic principles of the two major traditions of medical geography: disease ecology and medical care. Examined are the etiology, diffusion, and distribution of selected major diseases. Issues pertaining to the spatial-temporal distribution, accessibility and utilization of medical care resources are presented. Prereq: GEO 172 or consent of instructor.

GEO 480 INTERNSHIP IN GEOGRAPHY. (3)

Provides supervised professional experience in public and private sector positions, and is intended to introduce students to the skills and working environments of careers in geography. Students should consult with a geography faculty member in advance of registering for this class. Prereq: Junior or senior standing in the major.

GEO 490G AMERICAN LANDSCAPES. (3)

A review and analysis of America's vernacular landscapes. Topics include: the history of settlement by Europeans, Africans, and others; evolving political allegiances; and the expansion of agricultural and industrial technologies in the context of diverse physical environments. The role of political philosophy in landscape development and historic preservation will be highlighted. Prereq: GEO 172 or consent of instructor.

GEO 491G JAPANESE LANDSCAPES. (3)

A study of the landscapes of Japan as vivid portrayal of Japanese culture and their value system, including review and analysis of major primary and secondary components of the Japanese landscape. Prereq: JPN 334 or GEO 334 or consent of instructor. (Same as JPN 491G.)

#GEO 499 SENIOR RESEARCH SEMINAR. (3)

Course is intended to provide a capstone experience in geographical research and problem-solving through demonstrating students' ability to identify an appropriate research topic in geography; developing and implementing appropriate research strategy; and presenting research results. Prereq: GEO 200; GEO 300.

GEO 505 PRACTICUM IN CARTOGRAPHY. (3)

Experience credit in which a small number of advanced students work under the direct supervision of the faculty or staff cartographer and in conjunction with other faculty members on departmental and contracted projects. May be repeated to a maximum of six hours. Prereq: GEO 305 and GEO 506 and consent of instructor.

**GEO 506 INTRODUCTION TO
COMPUTER CARTOGRAPHY. (3)**

A basic introduction to computer-assisted cartography. Emphasis on basic computer graphics literacy and automated techniques for spatial data acquisition, storage, processing, and output. Introduction to current mainframe, workstation, and desktop mapping programs. Prereq: GEO 305 or permission of instructor.

**GEO 509 APPLICATIONS OF
GEOGRAPHIC INFORMATION SYSTEMS. (3)**

An extension of GEO 409G, this course covers GISs in greater detail. Material common to GISs will be covered in lecture, and students choose between becoming familiar with several GISs or making intensive use of one or two systems. Actual data will be used and actual spatial issues or problems will be addressed. The student will be responsible for data procurement and input, analysis design, and output production, including maps. Prereq: An introductory GIS course (e.g. GEO 409G) or permission of instructor.

**GEO 512 GI SYSTEMS & SCIENCE:
ANALYTICAL ISSUES. (3)**

This course introduces advanced spatial statistical techniques under the rubric of spatial analysis. The course is organized as a seminar. Participants will first learn advanced spatial analysis techniques and apply them to exercises. Following these exercises, participants will learn statistical techniques including Monte Carlo simulations and kriging. A project that teams of students develop with the instructor will be required of all participants. Prereq: GEO 409G.

**GEO 514 GI SYSTEMS & SCIENCE:
TECHNICAL ISSUES. (3)**

This course merges issues and approaches from geography, computer science, information management in the practically oriented development of geographic information applications. The exercises focus on developing the necessary skills for constructing robust GIS applications, culminating in a project, complemented by parallel lectures that introduce relevant aspects of geographic information processing. A student prepared project is the keystone in this course and will include various aspects of developing geographic information applications ranging from algorithms to applications. Prereq: GEO 409G or consent of instructor.

**GEO 516 GI SYSTEMS & SCIENCE:
MANAGEMENT ISSUES. (3)**

Examination of managerial aspects of geographic information systems and science that includes information system design, cost/benefit analysis, elementary programming, and metadata production. Course will also examine organizational and legal aspects of developing GIS in private and public sectors. Issues including access, copyright, and data protection will be discussed in their relevance to GIS. Prereq: GEO 409G or consent of instructor.

GEO 530 BIOGEOGRAPHY AND CONSERVATION. (3)

An introduction to the geographic patterning of biological diversity, exploring its origins, dynamics, and present trends. Examines the interplay among physical conditions, ecological interactions, evolutionary processes, and the historical movements of organisms and land masses as they have combined to affect the distribution of species, with particular attention to the application of biogeographic knowledge to current problems of species loss and conservation. Prereq: Two semesters of introductory biology or physical geography, or consent of the instructor. (Same as BIO 530.)

GEO 542 POLITICAL GEOGRAPHY. (3)

This course examines how space and political activities are related. Major topics will include: history of political geographic thought; geopolitics; nationalism and identity; the territorial state; regionalism; conflicts; borders and frontiers, and electoral geography, at a range of scales.

GEO 544 HUMAN POPULATION DYNAMICS. (3)

The study of human population distributions, densities, and growth patterns through analyses of the processes of fertility, mortality and mobility. Topical coverage includes the environmental, social, political, economic, and behavioral impacts on personal action and population change. Emphasis is placed on historic and contemporary meanings and influences of population diversity, with special attention given to issues of gender, race, and class.

GEO 545 TRANSPORTATION GEOGRAPHY. (3)

This course addresses concepts critical to understanding transport systems. Economic, social and political as well as spatial perspectives to transport matters are emphasized. Problems, issues and trends facing the sector in both the developed and developing world along with appropriate responses are paramount. Topics include the bases and impact of transport, communications, mass transit, Third World cities, regional development, shipping, railway policies, and the dynamics of airline survival. Prereq: GEO 455 or consent of instructor.

GEO 546 TOURISM AND RECREATION GEOGRAPHY. (3)

Tourism is the world's fastest-growing economic sector, creating and transforming places, regions and broader geographies of travel, movement, and investment. The course will examine concepts, models, and theories in the study of tourism and recreation. Selected themes include major travel flows and patterns; economic, environmental, and socio-cultural impacts; mass vs. "new" (e.g., eco-tourism, adventure tourism, extreme tourism) types of tourism; heritage tourism; marketing; place boosterism; tourism and recreation planning; and the politics of tourism. Local, national, and international examples in both developed and developing countries are discussed. Prereq: GEO 152, 172, 455, or consent of instructor.

GEO 550 SUSTAINABLE RESOURCE DEVELOPMENT AND ENVIRONMENTAL MANAGEMENT. (3)

A study of the theories and strategies for environmental management and sustainable development of resources. Topics covered include contemporary environmental degradation and resource use problems, political economy of resource use and environmental change, design and management of sustainable resource development, impact of sustainable development on gender issues and poverty, and environmental accounting. Prereq: GEO 130 or GEO 210 or consent of instructor.

GEO 551 JAPANESE MULTINATIONAL CORPORATIONS. (3)

A study of the giant Japanese multinational corporations in the world economy and their impact on development and environment of selected countries. Topics include: geographical organization of multinational corporate system; their locational decisions; affect of multinationals policies on the environment; and local economy. Prereq: Consent of instructor. (Same as JPN 551.)

GEO 560 INDEPENDENT WORK IN GEOGRAPHY. (3)

Individualized study and/or research intended to provide opportunities for students to explore topics in more depth than is offered in existing courses, or to address topics not covered in existing courses. Students work with a faculty supervisor in defining a specific area of study, appropriate learning objectives, and suitable evaluation criteria. Course format may range from critical reading of selected literatures to innovative research projects. Students should identify and consult with faculty supervisor well in advance of registration for this course. Prereq: Restricted to Geography majors with GPA of 3.0 or above in the department.

GEO 565 TOPICS IN GEOGRAPHY. (3)

Discussion, readings, and papers focusing on relevant topics in geography directed by a staff member having specific competence for the topics under study. Current research developments in particular geographic subfields will be stressed. May be repeated under different subtitles to a maximum of six credits. Prereq: Consent of instructor.

GEO 585 AGING AND ENVIRONMENT. (3)

Explores the elderly person's changing experience of environment. Physiological, psychological and social changes are related to adjustment within urban and rural community environments, special housing for the elderly, and long-term care environments. Prereq: Graduate or advanced undergraduate standing and consent of instructor. (Same as FAM/GRN 585.)

GEO 600 ANALYTICAL METHODS IN GEOGRAPHY. (3)

An introduction to the application of analytical methods to geographic problem solving. Topics cover sampling theory, probability theory and both parametric and nonparametric statistical techniques. Prereq: STA 570 or equivalent or consent of instructor.

**GEO 610 INTRODUCTION TO
METHODS IN GEOGRAPHY. (3)**

A broad survey of methods and methodological debates of research in human/physical geography. Emphasis on contemporary research examples. Prereq: Graduate standing.

**GEO 655 SPECIAL STUDY OF
SYSTEMATIC GEOGRAPHY. (3)**

The application of the methods of systematic geography to particular special studies in topical areas, such as conservation, urban areas, climatology, cartography, or others. May be repeated to a maximum of six hours. Prereq: Appropriate 500-level course work in systematic or topical geography (e.g., conservation, urban, climatology, cartography).

**GEO 700 ADVANCED ANALYTICAL METHODS
IN GEOGRAPHY. (3)**

A survey of the application of multivariate statistical techniques to geographic problem solving. Prereq: GEO 600 or consent of instructor.

GEO 702 CONCEPTS IN GEOGRAPHY. (3)

Contemporary geographic concepts and theories are examined with emphasis on concepts within human geography, especially with reference to the economic, urban, cultural, and population subfields within the discipline. Prereq: Graduate student status.

**GEO 705 ADVANCED GEOGRAPHIC
METHODS (Subtitle required). (3)**

In-depth study and application of one or more research methods/techniques (e.g., qualitative methods, ethnography, textual analysis, visual analysis, GIS). Intended to offer M.A. and Ph.D. students advanced methodological specialization in geography. May be repeated to a maximum of six credits under different subtitles. Prereq: GEO 600 or equivalent.

GEO 706 ADVANCED FIELD STUDIES

(Subtitle Required). (1-9)

Field-based, regionally specific study of selected topics in cultural, environmental, political, social, urban, or economic geography. May be repeated to a maximum of 18 credits with change in field site. Prereq: Consent of instructor.

GEO 707 DEVELOPMENT OF GEOGRAPHIC THOUGHT. (3)

An analytical review of the evolution of geographic thought, in terms of concepts, methodologies and scholars, emphasizing the basic literature through a series of topics.

GEO 708 GEOGRAPHIC INFORMATION SYSTEMS RESEARCH METHODOLOGIES. (3)

Following a brief overview of GIS, remote sensing, GPS, and other relevant information technologies as information collection, presentation, and analytical aids, this course will consider current developments of geographic information technologies. These include, but are not limited to, field GIS, public participation GIS, participatory information technology, collaborative environments, and spatial decision-making. Discussion of these developments will be complemented by a rigorous examination of theoretical and methodological issues. Prereq: GEO 409G or its equivalent, or consent of instructor.

GEO 711 CULTURAL STUDIES AND GEOGRAPHY (Subtitle required). (3)

Seminar in cultural studies and geography, including, for example, interpretation and analysis of the built environment; space and representation; the political economy of landscape production; regional imagery; media studies; popular culture; the social construction of community; historic preservation; recreation, tourism and society. May be repeated to a maximum of nine credits under different subtitles.

GEO 712 DEVELOPMENT STUDIES AND GEOGRAPHY (Subtitle required). (3)

Seminar in selected topics in the policies, practices, and processes of development, including, for example, political economy perspectives on development; anti-development and postcolonial theory; economic restructuring and transition economies; gender and development; the relations between development and migration, transportation and tourism; environmental management and sustainable development. May be repeated to a maximum of nine credits under different subtitles.

GEO 713 ECONOMIC GEOGRAPHY: (Subtitle required).(3)

A seminar in economic geography, including, for example, global, regional, and local economic restructuring, global financial systems; foreign direct investment and trade; geography of multinational corporations; geography of labor; spaces of production and spaces of consumption; gender and economic space; space-time convergence; information and communications. May be repeated to a maximum of nine credits under different subtitles.

GEO 714 POLITICAL GEOGRAPHY: (Subtitle required). (3)

A seminar in political geography, including, for example, electoral systems; state theory; post-Cold War democratization; the geography of revolutionary change; critical geopolitics; political

economy of environmental movements; political economy of globalization discourses and practices. May be repeated to a maximum of nine credits under different subtitles.

GEO 715 GEOGRAPHY AND SOCIAL THEORY

(Subtitle required). (3)

Seminar in geography and social theory, including, for example, theories of human spatiality; marxist, neo-marxist, and post-marxist theory; postmodernism and poststructuralism; feminist theory; actor network theory; identity theory; geographic thought and society; technology and society. May be repeated to a maximum of nine credits under different subtitles.

GEO 717 URBAN GEOGRAPHY (Subtitle required). (3)

Seminar in urban geography, including, for example, urban morphology; urban systems; the local state; urban social fragmentation; conflicts over urban growth and development; urban transportation planning; urban historical geography; gender and urban space; race and urban space; urban landscapes. May be repeated to a maximum of nine credits under different subtitles. Prereq: Consent of instructor.

GEO 720 REGIONAL STUDIES (Subtitle required). (3)

Seminar in the study of selected topics in cultural, environmental, political, social, urban or economic geography, set within a regional context. May be repeated with change in regional focus to a maximum of nine credits under different subtitles.

GEO 721 TOPICAL SEMINAR IN PHYSICAL GEOGRAPHY (Subtitle required). (3)

Examination of selected topics in geomorphology, hydrology, pedology, biogeography, climatology, and earth system science. May be repeated to a maximum of nine credits under different subtitles. Prereq: Consent of instructor.

GEO 722 SOCIAL GEOGRAPHY (Subtitle required). (3)

Seminar in social geography, including, for example, race and gender, feminist geography, health care, disease and society; the geography of AIDS; the geography of aging and the life course; poverty and social policy; human behavior in space and time; population and migration studies; spatial structure of social networks; transportation of disadvantaged groups. May be repeated to a maximum of nine credits under different subtitles. Prereq: Consent of instructor.

GEO 731 EARTH SURFACE SYSTEMS. (3)

A treatment of earth surface systems from the perspective of complex systems theory. The course takes a holistic viewpoint, emphasizing interactions between the atmo-, litho-, hydro-, and biospheres and the manifestations of those signatures in soils, landforms, and ecosystems. Prereq: Consent of instructor.

GEO 740 RESEARCH INTERNSHIP

(Subtitle required). (1-6)

To provide students with course credit for faculty supervised internships with governmental and non-governmental organizations. May be repeated to a maximum of nine credits.

GEO 741 TEACHING PRACTICUM. (1)

Introduction to teaching, with particular focus on pedagogical issues in geography courses. Intended to provide students with background sufficient to enable them to assume full responsibility for university and college level courses.

GEO 742 PREPARING FUTURE
FACULTY IN GEOGRAPHY. (1)

Introduction to the professoriate, with particular focus on geography within the academy. Intended to provide students with background sufficient to assume responsibility as new faculty members in universities and colleges.

GEO 743 RESEARCH PROPOSALS
AND GRANT WRITING. (1)

Introduction to basic geographic research proposal design standards, with particular emphasis on the requirements of granting agencies.

GEO 748 MASTER'S THESIS RESEARCH. (0)

Half-time to full-time work on thesis. May be repeated to a maximum of six semesters. Prereq: All course work toward the degree must be completed.

GEO 749 DISSERTATION RESEARCH. (0)

Half-time to full-time work on dissertation. May be repeated to a maximum of six semesters. Prereq: Registration for two full-time semesters of 769 residence credit following the successful completion of the qualifying exams.

GEO 767 DISSERTATION RESIDENCY CREDIT. (2)

Residency credit for dissertation research after the qualifying examination. Students may register for this course in the semester of the qualifying examination. A minimum of two semesters are required as well as continuous enrollment (Fall and Spring) until the dissertation is completed and defended.

GEO 768 RESIDENCE CREDIT
FOR THE MASTER'S DEGREE. (1-6)

May be repeated to a maximum of 12 hours.

GEO 769 RESIDENCE CREDIT
FOR THE DOCTOR'S DEGREE. (0-12)

May be repeated indefinitely.

GEO 772 SPECIAL RESEARCH
PROBLEMS IN GEOGRAPHY. (1-6)

Open to doctoral candidates who have the necessary training and ability to conduct research on a selected problem. May be repeated to a maximum of 12 credits. Prereq: Approval of the director of graduate studies.