

GEOGRAPHY AND ENVIRONMENTAL PLANNING (GEOG)

Courses

GEOG 502 ENERGY RESOURCES (3)

Spatial patterns of traditional and alternative forms of energy will be analyzed. The many facets of the energy problem will be analyzed including physical deposits, economic variables, public policy implication and geographical patterns.

GEOG 503 SOILS AND VEGETATION (3)

A resource study of the world's soils and plant formations with emphasis placed upon their genesis and spatial differentiations. Prerequisite: GEOG 101 and one of the following: CHEM 101, BIOL 110, BIOL 200/ BIOL 200L (BIOL 201) or BIOL 205.

GEOG 504 INTRODUCTION TO REMOTE SENSING AND PHOTOGRAMMETRY (3)

Fundamentals and the development of remote sensing, the nature of the electromagnetic radiation and its interaction with the atmosphere and surface objects, photographic systems, aerial photography, and photogrammetry basics.

GEOG 505 CARTOGRAPHY AND GRAPHICS I (3)

Study in design, construction and effective application of maps and charts for analysis and publication; practical exercises in the use of cartographic tools, materials and techniques. Prerequisite: GEOG 518 or consent of instructor.

GEOG 510 HISTORICAL GEOGRAPHY OF URBANIZATION (3)

Spatial and temporal development of urbanization and urban morphology from the rise of civilization in the ancient Near East to the contemporary post-industrial city. The entire scope of urban functions is surveyed, with the emphasis on the city as a man-made environment.

GEOG 511 CULTURAL GEOGRAPHY (3)

Study of origins and diffusion of cultures and the resulting impact in creating the world's contrasting cultural landscapes.

GEOG 512 ECONOMIC GEOGRAPHY (3)

Designed to explain the location of economic activities through a series of principles and theories. Emphasis on the various sectors of the economy, transportation and economic development.

GEOG 515 CLIMATOLOGY (3)

Character, causes and distribution of climatic types. Emphasis upon world pattern. Students may be required to do fieldwork.

GEOG 516 QUANTITATIVE METHODS IN GEOGRAPHY (3)

Focus on statistical problems associated with the analysis of geographic data. Emphasis on the unique spatial problems of point pattern analysis, aerial association and regionalization.

GEOG 517 METEOROLOGY (3)

Examines the composition and structure of the atmosphere, thermodynamic processes, forces and related small and large scale motions, air masses, fronts, tropical cyclones, solar and terrestrial radiation, general circulation and weather forecasting. Field work may be required.

GEOG 518 GEOGRAPHIC INFORMATION SYSTEMS (3)

Hardware and software for the storage, retrieval, manipulation, analysis and display of data. Emphasizing raster-based geographic information systems.

GEOG 519 POLITICAL GEOGRAPHY (3)

Effect of political groupings upon human's use of the world and the influence of the geographic base upon political power.

GEOG 520 POPULATION GEOGRAPHY (3)

General population theory, data sources for population geographers and the processes of fertility, mortality and migration. Patterns of population growth and change viewed from both temporal and geographical perspectives.

GEOG 522 URBAN SYSTEMS I (3)

Survey of the structure, functions, forms and development of urban units. Emphasis upon the locational features of social, economic and cultural phenomena; fieldwork required.

GEOG 523 GIS APPLICATIONS (3)

Geographic information systems for solving real-world problems; vector-based GIS software, microcomputers for development of a GIS application. Prerequisite: GEOG 518 or consent of instructor.

GEOG 526 FEMINIST GEOGRAPHIES (3)

Exploration of the intellectual foundations of the feminist critique; geographies of women and gender; influence of feminism across the discipline of geography. This course has been offered as a special topic; students who have earned credit for this course as a special topic will not receive additional credit for GEOG 526.

GEOG 527 OUTDOOR REC PLAN/MNGT (3)

A study of outdoor recreation in terms of relationships between people, land, and leisure. Emphasis on the principles of planning, designing and maintaining outdoor recreation areas and facilities.

GEOG 544 GEOGRAPHY OF SOUTH ASIA (3)

Survey of the physical and cultural geographies of Pakistan, India, Bangladesh, Nepal, Bhutan, Sri Lanka and the Maldives. Thematic and regional approaches applied in the study of the cultures, politics, environments, social structures, and economies of the South Asian Subcontinent. Emphasis on regional research project.

GEOG 551 GROWTH OF GEOGRAPHIC THOUGHT (3)

History, nature and methodology of geography as a discipline. Analysis of schools of geographic thought and critical evaluation of important geographic work.

GEOG 552 SEVERE AND HAZARDOUS WEATHER (3)

Examines the complexities and power of severe and hazardous weather, providing an understanding of the way events, such as thunderstorms, tornadoes, and hurricanes, develop and evolve within the atmosphere. Topics include the descriptions and physical explanations of the types of severe and hazardous weather along their societal and political implications. Prerequisite: GEOG 101, GEOL 357, or GEOG 377.

GEOG 553 COMPREHENSIVE PLANNING (3)

The integration of separate urban systems into the comprehensive design of an urban region. Special emphasis will be placed on neighborhood, community and town planning. Fieldwork may be required. Prerequisites: GEOG 391 and GEOG 392 or equivalent and consent of instructor.

GEOG 554 RETHINKING BRAZIL (3)

Regional analysis of Brazil: human and physical geography, historical perspectives, humanities, cultural geography, and critical thinking of Brazil in its role as regional and global participant. Perspectives on the problematization of national, racial, and regional identities, and of historical legacies upon Brazil today. Prerequisite: GEOG 102 or GEOG 105 or GEOG 109.

GEOG 557 STUDIES IN NATURAL HAZARDS (3)

The nature, frequency of occurrence and distribution of environmental hazards and their impact on humans.

GEOG 560 GEOGRAPHY OF THE UNITED STATES AND CANADA (3)

Physical and cultural landscapes of the United State and Canada including patterns of economic development of each region and their relationship to their environmental setting.

GEOG 562 GEOGRAPHY OF AFRICA (3)

A systematic and regional approach to the study of people and environment of Africa, south of the Sahara. Special focus is placed on the distribution of natural resources and the historical-political development of each country as important background for the understanding of current African affairs.

GEOG 563 THE SILK ROAD: THE GEOGRAPHIES OF CENTRAL EURASIA (3)

Central Asian geographies and histories in the context of the extended Silk Road Region; its cultural identities, political economies, and ideological struggles; the bonds and interactions of the emerging nations of Central Asia with Russia, the U.S., China, Turkey, and Iran. Prerequisite: consent of instructor.

GEOG 564 GEOGRAPHY OF EAST ASIA (3)

Regional studies of the physical and cultural foundations in China, Japan and Korea. Emphasis upon human and economic resources and role in world affairs.

GEOG 565 GEOGRAPHY OF THE MIDDLE EAST (3)

Analysis of Southwest Asia and North Africa, including major natural and cultural resources, related patterns of spatial organization, economic and political development and associated problems.

GEOG 566 GEOGRAPHY OF EUROPE (3)

Regional analysis and appraisal of the human geography and natural resources of Europe. Problems of nationality, economic development and cultural conflicts.

GEOG 567 GEOGRAPHY OF RUSSIA (3)

Diverse human and physical geographical aspects of Russian's complex historical and contemporary development and its relationships with its neighbors. The interrelationships between people and their environments; physical, social, economic, political, demographic and cultural are considered.

GEOG 568 GEOGRAPHY OF LATIN AMERICA (3)

Analysis of Latin America will be focusing on the interrelationships between physical and cultural elements which provide a diversity of human habitats throughout the region. May be repeated for a maximum of 6 units.

GEOG 569 THE TWO DOWN-UNDERS: GEOGRAPHIES OF AUSTRALIA AND AOTEAROA-NEW ZEALAND (3)

Analysis of the physical and cultural landscapes of Australia and Aotearoa/New Zealand, including patterns of settlement and economic development and the relationship of these patterns to their environmental settings. Emphasis on the historical background of these countries' present landscapes.

GEOG 582 GEOGRAPHY/ENVIRONMENTAL PLANNING INTERNSHIP (1-6)

Supervised placement and research in selected public and private agencies at appropriate institutions. May be repeated for a maximum of 6 units. Prerequisite: consent of chairperson.

GEOG 584 TRAVEL AND STUDY (3-6)

Countries and topics to be selected by departments and instructors sponsoring the program. For complete information contact the chairperson of the department. Prerequisite: Consent of instructor; may be repeated for a maximum of 6 units.

GEOG 586 INDEPENDENT STUDY IN GEOGRAPHY (1-6)

Independent research, study or field experience under supervision of a member of the geography faculty. Designed for advanced students who wish to conduct independent investigation on aspects of geography which are of special interest or not covered in other courses. Registration arranged with department chairperson. Prerequisite: Advanced undergraduate standing with at least 18 credits in geography or graduate standing. May be repeated for a maximum of 6 credits.

GEOG 587 ENVIRONMENTAL IMPACT ANALYSIS (3)

The collection and analysis of physical, social, biological and economic information for the preparation of environmental impact statements (EIS).

GEOG 601 SEMINAR ON GEOGRAPHICAL PERSPECTIVES (3)

Study of major subfields of geography as they have emerged in the 20th century and their differing viewpoints. Prerequisite: Graduate standing.

GEOG 602 NATURE-POLITICS-POWER: ECOLOGICAL POLITICS AND POLITICAL ECOLOGIES (3)

Interdisciplinary seminar on the complex, contradictory, and complementary relationships of people, politics, and societies with the biophysical environment.

GEOG 603 URBAN HOUSING JUSTICE (3)

Urban housing inequality in US. Origins of racialized housing disparities. Informal exclusionary zoning. Human impact of housing inequalities. Alternative ways forward towards housing justice. This course has been offered as a special topic; students who have earned credit for this course as a special topic will not receive additional credit for GEOG 603.

GEOG 604 PLANNING FOR URBAN CLIMATE CHANGE (3)

Examination of vulnerability, adaptation, and resilience to climate change in urban environments. Prerequisite: program admission.

GEOG 605 SECURITIZING THE CITY (3)

Exploration of urban security at multiple scales including international, national, metropolitan region, city block, the home, and the human body.

GEOG 607 PLANNING FOR RESILIENT COMMUNITIES (3)

Examination of risks and vulnerabilities in hazard-prone areas, focusing on strategies for community resilience. Topics include resilience as a process and outcome, risk management, governance, and social-political factors in disaster planning. This course has been offered as a special topic; students who have earned credit for this course as a special topic will not receive additional credit for GEOG 607.

GEOG 608 APPLICATION OF GIS IN EMERGENCY MANAGEMENT (3)

Application of geographic information systems in emergency management. Geospatial Concept-of-Operations (GeoCONOPS), Geospatial Information Infrastructure (GII), National Incident Management System (NIMS), the Incident Command System (ICS), the National Preparedness Goal mission areas. Problems solving in five mission areas: prevention, protection, mitigation, response, and recovery. This course has been offered as a special topic; students who have earned credit for this course as a special topic will not receive additional credit for GEOG 608.

GEOG 620 QUALITATIVE METHODS (3)

Exploration of qualitative methods in geography. Basic principles of research design, ethical and procedural considerations.

GEOG 621 RESEARCH DESIGN (3)

Reviewing the literature, formulating a research question, and finding appropriate methodology to generate data and answer the research question.

GEOG 622 PROBLEMS AND ANALYSIS IN GEOGRAPHY (3)

Application of research methods to the analysis of geographic problems. Prerequisite: GEOG 621 or equivalent graduate research methods course.

GEOG 623 CONSTRUCTING THE ARCTIC: GEOGRAPHIES OF THE CIRCUMPOLAR NORTH (3)

The Arctic at the intersection of the humanities and the environment in the context of geographic, literary, artistic, and historic perspectives; its dynamic, changing and multiple conceptualizations through themes such as sovereignty, globalization, Indigeneity, exploration, and environmental change; the human-nonhuman relations and the multiplicity of human experiences of and expressions about the circumpolar north.

GEOG 624 GEOGRAPHIES OF CONSUMPTION AND WASTE (3)

Introduction to geographic relationships associated with contemporary consumption and waste disposal activities.

GEOG 625 PLANNING FOR A SUSTAINABLE REGION (3)

The theory and practice of comprehensive regional planning as well as methods for assurance sustainability. Prerequisite: Graduate standing.

GEOG 626 GIS DATABASE DESIGN (3)

Introduction to Geographic Information Science (GIS) database design. Prerequisite: GEOG 518 or consent of instructor.

GEOG 631 ADVANCED REMOTE SENSING: DIGITAL IMAGE PROCESSING AND ANALYSIS (3)

Satellite sensors, satellite data acquisition, field data collection and measurements, and the processing and analysis of various types of remotely sensed digital imagery. Prerequisite: a grade of "B" or higher in GEOG 504.

GEOG 652 GEOGRAPHIES OF HEALTH (3)

Interrelationship between health and our social and physical environments. Emphasis on geographic approaches to inequalities in health, well-being and care.

GEOG 654 CLIMATE CHANGE: SCIENCE TO POLICY (3)

A survey of past, current, and future climate change. Emphasis on Earth's radiation balance, causes of climate change, observed and predicted signals of climate change, and impacts and mitigation of climate change.

GEOG 664 PYTHON SCRIPTING FOR ARCGIS (3)

Python programming and scripting techniques for GIS. Fundamentals of Python, basic geoprocessing in GIS, key modules of ArcPy for mapping and spatial analysis, design of script tools for ArcGIS. This course has been offered as a special topic; students who have earned credit for this course as a special topic will not receive additional credit for GEOG 664. Prerequisites: GEOG 518; GEOG 523 or GEOG 665 recommended.

GEOG 665 ADVANCED TECHNIQUES IN GIS (3)

Project-based learning within the spatial framework of GIS. Emphasis on advanced GIS techniques for spatial analysis and on quantifying geographic patterns and relationships. Prerequisite: GEOG 518.

GEOG 666 WEB GIS (3)

Project-based learning within the spatial framework of web GIS applications. Emphasis on designing, developing, and deploying web-based GIS solutions online. This course has been offered as a special topic; students who have earned credit for this course as a special topic will not receive additional credit for GEOG 666. Prerequisite: GEOG 518.

GEOG 667 ENVIRONMENTAL HYDROLOGY (3)

Exploration of the water cycle and its interaction with human society. Precipitation, infiltration, runoff, and stream hydrology. Introduction to storm water mitigation, flood control, sanitary sewerage, and stream restoration.

GEOG 668 FLUVIAL GEOMORPHOLOGY (3)

Introduction to the study of river landforms and their generation. Emphasis on human impacts to river systems and applied geomorphology. This course has been offered as a special topic; students who have earned credit for this course as a special topic will not receive additional credit for GEOG 668.

GEOG 669 CLIMATE & HEALTH (3)

Survey of climate and health relationships, processes, and methodologies. Emphasis on acute impacts such as heatwaves and extreme weather to chronic conditions associated with air pollution, changing vector ecology, and food security.

GEOG 671 SPECIAL TOPICS IN PHYSICAL GEOGRAPHY (3)

Selected geographical topics dealing with physical landscape phenomena, especially with regard to distribution, relationships and significance to mankind. Topics will be announced. Prerequisite: consent of department (no more than 6 units may be applied toward a degree).

GEOG 672 SPECIAL TOPICS IN HUMAN GEOGRAPHY (3)

Topics in human geography. Varies each semester. Prerequisite: consent of department.

GEOG 673 HUMAN-ENVIRONMENTAL INTERACTIONS SPECIAL TOPICS (3)

Topics in human-environmental interactions. Varies each semester. Prerequisite: consent of department.

GEOG 685 DIRECTED READING IN GEOGRAPHY (1-3)

Independent reading in geography or related disciplines. Students must meet with a faculty advisor to draft a syllabus that outlines the purpose of the course, a plan of study, and specific learning outcomes of the course. The plan of study must require a minimum of 45 hours of work for each credit hour and regularly scheduled meetings to report progress, review work, and engage in reflective analysis about the course topic. The syllabus also must include a timeline for completion of learning assignments, criteria for grading them, and a bibliography or other relevant sources for investigating the topic. Prerequisite: consent of instructor.

GEOG 696 INDEPENDENT STUDY IN GEOGRAPHY (1-6)

Independent research, study or field experience under supervision of a member of the geography faculty. Designed for advanced students who wish to conduct independent investigation on aspects of geography which are of special interest or not covered in other courses. May be repeated for a maximum of 6 units. Prerequisite: consent of graduate director.

GEOG 701 LAND USE STUDIES (2-6)

Selected problems of urban, rural and rural-urban landscapes, which consider and account for geographic differences in land utilization; topics to be announced. Prerequisite: Consent of department (no more than 6 units may be applied toward a degree).

GEOG 796 INTERNSHIP IN GLOBAL SKILLS (3-6)

Internship with government or non-governmental organization, work to be concerned with issues of international scope. Graded S/U. Prerequisites: admission to Global Skills accelerated MA program; GEOG 621.

GEOG 797 RESEARCH (3)

Investigation of problem or problems based upon field and library study, which will contribute to geographical knowledge. Graded S/U. Prerequisite: consent of department.

GEOG 799 RESEARCH PROJECT CONTINUUM (1)

One unit taken to maintain enrollment while completing research project begun in GEOG 797. Graded S/U. Prerequisites: previous enrollment in GEOG 797; department consent required.

GEOG 897 GEOGRAPHY THESIS (6)

Thesis credit while working on an approved thesis. Graded S/U. Six units taken in one semester.

GEOG 898 GEOGRAPHY THESIS (3)

Thesis credit while working on approved thesis: three units taken over two semesters for a total of six units. Graded S/U.

GEOG 899 THESIS CONTINUUM (1)

One unit taken to maintain enrollment while completing thesis. Graded S/U based on making satisfactory progress on thesis.