GEOG Geography

GEOG 1101 Introduction to Human Geography
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Basic concepts of cultural geography including characteristics and spatial patterns of population, religions, settlements, economies, languages, nutrition, health, migration, economic development, art, music, and other cultural phenomena.
Prerequisite(s): GEOG 1101H, GEOG 1101S.

GEOG 1101H Introduction to Human Geography
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Basic concepts of cultural geography including characteristics and spatial patterns of population, religions, settlements, economies, languages, nutrition, health, migration, economic development, art, music, and other cultural phenomena.
Cross Listing(s): GEOG 1101H, GEOG 1101S.

GEOG 1101S Introduction to Human Geography
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Basic concepts of cultural geography including characteristics and spatial patterns of population, religions, settlements, economies, languages, nutrition, health, migration, economic development, art, music, and other cultural phenomena.
Prerequisite(s): Highly recommended to be taken concurrently with GEOG 1111.

GEOG 1110 Climate and the Landscape Lab
1 Credit Hour. 0 Lecture Hours. 2 Lab Hours.
A series of laboratories and exercises designed to provide hands-on applications of general theories regarding earth processes discussed in GEOG 1111, Climate and the Landscape.
Prerequisite(s): Highly recommended to be taken concurrently with GEOG 1110.

GEOG 1111 Climate and the Landscape
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
The earth's surface in its areal differentiation. Focuses on the various elements of physical geography that act as a foundation to the discipline, including location and interaction of physical surficial phenomena.
Prerequisite(s): Highly recommended to be taken concurrently with GEOG 1110.

GEOG 1130 World Regional Geography
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Study of geographic regions of the world emphasizing physical landscapes, resources, economies, culture and politics. Selected problems or situations of contemporary interest will be incorporated.
Cross Listing(s): GEOG 1130H, GEOG 1130S.

GEOG 1130H World Regional Geography
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Study of geographic regions of the world emphasizing physical landscapes, resources, economies, culture and politics. Selected problems or situations of contemporary interest will be incorporated.
Cross Listing(s): GEOG 1130, GEOG 1130S.

GEOG 1130S World Regional Geography
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Study of geographic regions of the world emphasizing physical landscapes, resources, economies, culture and politics. Selected problems or situations of contemporary interest will be incorporated.
Cross Listing(s): GEOG 1130, GEOG 1130H.

GEOG 3230S Economic Geography
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Study of the distribution, production and utilization of the world's basic commodities.
Prerequisite(s): GEOG 1101 or GEOG 1130.
Cross Listing(s): GEOG 3230.

GEOG 3330 Weather and Climate
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Elements and controls of weather and climate and the distribution and characteristics of climate regions.
Prerequisite(s): GEOG 1111.

GEOG 3440 Introduction to GIS and Cartography
0.4 Credit Hours. 0.2 Lecture Hours. 0.4 Lab Hours.
An introduction to the basic concepts, theories, techniques, and applications of Geographic Information Systems (GIS) and cartography. Students will learn and apply GIS and cartographic concepts to gain extensive hands-on experience in thematic mapping and manipulation of geo-referenced spatial information using GIS software.

GEOG 4120 Introduction to Research
2 Credit Hours. 2 Lecture Hours. 0 Lab Hours.
The process of research utilizing the scientific method will be studied. Research methods in human and physical geography are discussed and critiqued. Methodologies including literature searches, topic selection and refinement, and research problem solving will be discussed. A proposal for a research project will be selected or assigned, a proposal written, and an oral presentation of the proposed research will be made. A minimum grade of “B” is required to continue in the research sequence.
Prerequisite(s): Permission of instructor required.

GEOG 4130 Biogeography
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Introduces students to biogeography: the study of the distribution of plants and animals. Both historical taxonomic and ecosystems biogeography are covered. The analysis and explanation of spatial patterns of plant and animal distribution, while addressing change in species distribution and evolution in response to climate change and the process of continental drift that have taken place in the past and are taking place today, will be emphasized.
Prerequisite(s): Completion of GEOG 1111 or BIOL 1130 or BIOL 1230 or BIOL 1331 or BIOL 1335 or GEOL 1430.

GEOG 4131 Geography of the American South
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Systematic regional treatment of the South including the physical, cultural and economic aspects of its various regions.

GEOG 4232 Geography of Latin America
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Study of the physical, cultural and economic geography of Latin America, including Mexico.
Cross Listing(s): LAST 4232.

GEOG 4233 Geography of Asia
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
A survey of the physical, cultural, political and economic geography of the countries of Asia. Selected problems or situations of contemporary interest will be incorporated.
Cross Listing(s): GEOG 4233S.

GEOG 4233S Geography of Asia
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
A survey of the physical, cultural, political and economic geography of the countries of Asia. Selected problems or situations of contemporary interest will be incorporated.
Cross Listing(s): GEOG 4233.

GEOG 4330 Geography of Africa South of the Sahara
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
A survey of the physical, cultural, political and economic geography of Africa south of the Sahara Desert. Selected problems or situations of contemporary interest will be incorporated.
Cross Listing(s): AAST 4330.
GEOG 4430  Geography of Europe
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
Survey of the physical, cultural, political and economic geography of Europe. Situations of contemporary interest will be included.
Cross Listing(s): GEOG 4430S.

GEOG 4430S  Geography of Europe
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
Survey of the physical, cultural, political and economic geography of Europe. Situations of contemporary interest will be included.
Cross Listing(s): GEOG 4430.

GEOG 4542  Intermediate GIS
0.4 Credit Hours.  0.2 Lecture Hours.  0.4 Lab Hours.
An introduction to advanced data models and spatial data analysis functions of Geographic Information Systems (GIS) software, with an emphasis on the conversion among various GIS data formats and geodatabase construction and management.
Prerequisite(s): GEOG 4430.

GEOG 4610  Senior Thesis Seminar
1 Credit Hour.  1 Lecture Hour.  0 Lab Hours.
Proficiency in formal scientific paper presentation will be demonstrated. The student's senior research topic from GEOG 4820 will generate both written and oral presentations made in a formal setting to an audience of professors and peers.
Prerequisite(s): GEOG 4120.

GEOG 4790  Internship in Geography
1-6 Credit Hours.  0 Lecture Hours.  0 Lab Hours.
The internship allows students to work in a professional setting related to their chosen concentration in the field. Undergraduate students can earn between one and six credits for internships approved by their academic advisor and the Department's Internship Director. Students must maintain contact with the Internship Director throughout the course of the internship work, and must submit a written report and a work product at the end of the project. Internship credits can be used for elective credit only and may not substitute for specific degree requirements.
Prerequisite(s): Permission of the Geology and Geography Internship Director is required.

GEOG 4830  Senior Thesis Research I
3 Credit Hours.  0 Lecture Hours.  0 Lab Hours.
Students will complete a literature review and evaluation and conduct independent research as outlined in their research proposal formulated during Introduction to Research (GEOG 4120). Research is conducted under the direction of a faculty advisor and will lead to the completion of the senior thesis.
Prerequisite(s): A minimum grade of "B" in GEOG 4120 and a minimum GPA of 3.0.

GEOG 4831  Senior Thesis Research II
3 Credit Hours.  0 Lecture Hours.  0 Lab Hours.
The process of scientific communication will be investigated and practiced through completion of a senior thesis project. This project includes both a written thesis and research presentation. Students will format a thesis manuscript suitable for publication in a professional journal and design and deliver an oral presentation suitable for a professional conference.
Prerequisite(s): A minimum grade of "B" in GEOG 4830.

GEOG 5090  Selected Topics
1-9 Credit Hours.  0-9 Lecture Hours.  0-9 Lab Hours.
Offered with or without a lab on an experimental basis.
Cross Listing(s): GEOG 5090S, GEOG 5090G.

GEOG 5090S  Selected Topics
1-9 Credit Hours.  0-9 Lecture Hours.  0-9 Lab Hours.
Offered with or without a lab on an experimental basis.
Cross Listing(s): GEOG 5090, GEOG 5090G.

GEOG 5091  Applied GIS
4 Credit Hours.  0 Lecture Hours.  8 Lab Hours.
Applications of advanced GIS design and modeling to a specific topical and/or geographic area. Topics and studies will be varied over time.
Prerequisite(s): GEOG 3440 and GEOG 4542 and GEOG 5540.
Cross Listing(s): GEOG 5091G.

GEOG 5130  Geography of North America
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
Systematic regional treatment of Canada and the United States including the physical, cultural, and economic aspects of various sub-regions. Special attention will be paid to comparative themes such as resource development, trade, and migration.
Cross Listing(s): GEOG 5130G.

GEOG 5230  Urban Geography
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
An analysis of site, situation, base, principal functions, distribution, supporting areas and internal structure of urban settlements.
Prerequisite(s): GEOG 1101 or GEOG 1130.
Cross Listing(s): GEOG 5230S, GEOG 5230G.

GEOG 5230S  Urban Geography
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
An analysis of site, situation, base, principal functions, distribution, supporting areas and internal structure of urban settlements.
Prerequisite(s): GEOG 1101 or GEOG 1130.
Cross Listing(s): GEOG 5230, GEOG 5230G.

GEOG 5231  Economic Geography
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
Study of the distribution, production and utilization of the world’s basic commodities.
Prerequisite(s): GEOG 1101 or GEOG 1130.
Cross Listing(s): GEOG 5231G.

GEOG 5330  Population Geography
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
This course explores issues and themes related to the patterns, processes, and consequences of the spatial distribution of the world’s population. The course is organized around the fundamental components of population change, fertility, mortality, and migration. Current events related to population change and distribution in multiple geographical contexts will constitute a primary focus of the course.
Prerequisite(s): GEOG 1101 or GEOG 1130.
Cross Listing(s): GEOG 5330G.

GEOG 5430  Political Geography
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
This course will cover the geography of political behavior from the local to the global scale by examining the relationship of geography and politics. Students will investigate the rapidly changing geopolitics of the era in which they live, with special emphasis on international relations, sovereignty, war, and terrorism. Additionally, the course will focus on redistricting, the Electoral College, and other geographic elements of our American democratic system.
Prerequisite(s): GEOG 1101 or GEOG 1130.
Cross Listing(s): GEOG 5430S, GEOG 5430G.

GEOG 5430S  Political Geography
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.
This course will cover the geography of political behavior from the local to the global scale by examining the relationship of geography and politics. Students will investigate the rapidly changing geopolitics of the era in which they live, with special emphasis on international relations, sovereignty, war, and terrorism. Additionally, the course will focus on redistricting, the Electoral College, and other geographic elements of our American democratic system.
Prerequisite(s): GEOG 1101 or GEOG 1130.
Cross Listing(s): GEOG 5430.
**GEOG 5435 Nature and Society**  
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.  
This course will examine factors that affect humans' perspectives on resources and analyze the availability, scarcity, and valuing of natural resources, in addition to conflicts over their use.  
**Cross Listing(s):** GEOG 5435G.

**GEOG 5441 Remote Sensing**  
4 Credit Hours.  2 Lecture Hours.  4 Lab Hours.  
This course is designed to introduce the principles and applications of remote sensing and imagery, including electromagnetic energy, the interaction between energy and earth's surface, remotely sensed data, and the major sensor systems.  
**Cross Listing(s):** GEOG 5441G, GEOG 3741.

**GEOG 5530 Cultural Geography**  
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.  
An examination of the world's diverse cultural landscapes. Emphasis on the connections between social, political, religious and agricultural patterns and the impact of societies on the natural environment.  
**Prerequisite(s):** GEOG 1130 or GEOG 1101.  
**Cross Listing(s):** GEOG 5530G, GEOG 3530.

**GEOG 5531 Environmental Impact and Remediation**  
3 Credit Hours.  3 Lecture Hours.  0 Lab Hours.  
This course will introduce students to the National Environmental Policy Act (NEPA), its Environmental Impact Assessment (EIA) process per the Council on Environmental Quality (CEQ), and review criteria regarding whether a Finding Of No Significant Impact (FONSI) or requirement for an Environmental Impact Statement (EIS) is issued. Students will see how the EIA process can be applied to the workflow of federal projects, from the research phase through planning, remediation, monitoring, evaluation, and improved regulatory enforcement/environmental policy.  
**Prerequisite(s):** A minimum grade of "D" in GEOG 1111.  
**Cross Listing(s):** GEOG 5531G.

**GEOG 5540 Advanced GIS**  
4 Credit Hours.  2 Lecture Hours.  4 Lab Hours.  
This course covers the advanced spatial analysis and modeling functions of GIS and offers both fundamental theoretical background and extensive hands-on experience in spatial analysis and modeling. Major topics include network analysis, surface modeling, spatial patterns analysis, spatial data visualization, and basics of spatial statistics.  
**Prerequisite(s):** GEOG 3440 and GEOG 4542.  
**Cross Listing(s):** GEOG 5540G, GEOG 4543.

**GEOG 5545 Ecohydrology**  
4 Credit Hours.  3 Lecture Hours.  3 Lab Hours.  
This course will cover how water interacts to connect the biotic and abiotic components of ecosystems, with a focus on forests. Students will measure hydrologic processes to determine the water budget of an on-campus forest and associate these measurements to ecological processes upon which human society relies (watershed management and sustainable agriculture). This includes training on common and cutting-edge ecohydrological field equipment installation, operation, maintenance, and data analysis techniques. Additionally, students will compare their results to studies around the globe.  
**Prerequisite(s):** A minimum grade of "D" in GEOG 1111.  
**Cross Listing(s):** GEOG 5545G.

**GEOG 5590 Field Studies in Geography**  
3-8 Credit Hours.  3-8 Lecture Hours.  0 Lab Hours.  
An intensive course on a specific region of the world conducted in that region combining lecture, observation and travel. Students usually will bear tuition, travel and living expenses during the course. May be repeated for credit in different regions.  
**Cross Listing(s):** GEOG 5590S, GEOG 5590G.