

# Geography - GEOG

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## Courses

**GEOG 1000 INTRODUCTION TO GEOGRAPHY (1)** LEC. 1. LAB. 0, LEC. 0. Introduction to fundamental concepts and major fields of study in geography

**GEOG 1010 GLOBAL GEOGRAPHY (3)** LEC. 3. Social Science I Core. Spatial and locational context for analyzing change in the contemporary world, including elements of both physical and cultural environments.

**GEOG 1017 HONORS GLOBAL GEOGRAPHY (3)** LEC. 3. Pr. Honors College. Spatial and locational context for analyzing change in the contemporary world, including elements of both physical and cultural environments.

**GEOG 1020 GLOBAL SYSTEMS WEATHER/CLIMATE (4)** DSL/LLB. The 'Weather and Climate' GS course will teach students the difference between weather and climate. They will evaluate the effect of weather on the food we eat, where we live, what we wear and the science behind climate change. This course will identify and describe Earth's physical systems and make connections between them.

**GEOG 1030 GLOBAL SYSTEMS LAND/WATER (4)** DSL/LLB. The 'Land and Water' Global Systems course will compare the modification of land and water resources due to human interventions and weather anomalies over time. It will highlight the connection between temperature and precipitation, weathering of rocks, soil type and the river system, human nature interactions and ecosystems of the Earth.

**GEOG 2000 PROFESSIONAL DEVELOPMENT (1)** LEC. 1. Introduction to career opportunities in the Geosciences; goal selection and charting a pathway to success as a professional. Includes writing skills, research and funding opportunities, internships, creation of resumes and ePortfolios, and job applications.

**GEOG 2010 HUMAN GEOGRAPHY (3)** LEC. 3. Spatial perspectives on modern society such as population change, economics, politics, urban development, and local culture, and geography's approach to solving problems using case studies and issues.

**GEOG 2017 HONORS HUMAN GEOGRAPHY (3)** LEC. 3. Spatial perspectives on modern society such as population change, economics, politics, urban development, and local culture, and geography's approach to solving problems using case studies and issues.

**GEOG 2020 PHYSICAL GEOGRAPHY (3)** LEC. 3. Selected elements of the earth's physical system to include such items as landforms, basic weather elements, soils and vegetation.

**GEOG 3000 SPORTS GEOGRAPHY (3)** LEC. 3. Geographical basis of sports at different spatial scales, including locational strategies, sportive nationalism, and the urban political economy of sports.

**GEOG 3110 UNITED STATES AND CANADA (3)** LEC. 3. Survey of the region incorporating physical and cultural elements, providing a synthesis of the economic and political processes of the U.S. and Canada.

**GEOG 3120 ALABAMA AND THE SOUTHEAST (3)** LEC. 3. Study of the physical and cultural environments of the state.

**GEOG 3130 LATIN AMERICA (3)** LEC. 3. Survey of physical and human landscape of the region including historical geography, natural resources, economic development and problems and prospects affecting major countries.

**GEOG 3140 AFRICA (3)** LEC. 3. Analysis of the relationships among diverse population groups and the physical environments of sub-Saharan Africa.

**GEOG 3150 EUROPE (3)** LEC. 3. Survey of physical and human landscape of the region including historical geography, natural resources, economic development, and problems and prospects affecting several of the major countries.

**GEOG 3300 INTERNATIONAL TRAVEL AND TOURISM (3)** LEC. 3. Environmental and cultural patterns that characterize places attractive to tourists. Provides realistic situations for developing travel plans and programs.

**GEOG 3810 CARTOGRAPHY AND GRAPHICS (4)** LEC. 2. LAB. 2. Techniques of map production including relevant computer graphics applications and related laboratory exercises.

**GEOG 4740 SENIOR SEMINAR (2)** SEM. 2. Individual research by geoscience undergraduates is coupled with improved written and oral communication skills along with resume and ePortfolio development. May count GEOG 4740 or GEOL 4740.

**GEOG 4920 INTERNSHIP (3)** LEC. 3. Opportunity to apply classroom experience to real job setting. Course may be repeated for a maximum of 6 credit hours.

**GEOG 4930 DIRECTED STUDIES (1-4)** IND. Departmental approval. Conferences, reading, research and/or reports may fulfill course requirement. Course may be repeated for a maximum of 4 credit hours.

**GEOG 5010 URBAN GEOGRAPHY AND SUSTAINABILITY (3)** LEC. 3. Senior standing or Departmental approval. An introduction to the field of urban geography and urban sustainability. Basic principles and processes that constitute the growth of urban areas, history, impact of urbanization, adaptation and mitigation towards a sustainable future.

**GEOG 5210 CLIMATOLOGY (3)** LEC. 3. Pr., Senior standing or departmental approval. An introduction to the field of climatology. Basic principles and process that constitute the earth's climate system (e.g. surface-atmosphere energy budget, the hydrologic cycle, and atmospheric motion) as well as climate change and sea level rise.

**GEOG 5220 GEOMORPHOLOGY (3)** LEC. 2. LAB. 2. Basic concepts, terms, and techniques used to identify landforms and their evolutionary processes. Study of the origin of landforms with emphasis on the eologic processes and structures that generate the landforms and applications of landform analysis. Two all-day weekend trips are required. Two one-hour classes and one two-hour laboratory per week.

**GEOG 5350 ECONOMIC GEOGRAPHY (3)** LEC. 3. Departmental approval. Economic Geography in a global context. Spatial aspects of resource use, agricultural development, manufacturing production and services.

**GEOG 5380 POLITICAL GEOGRAPHY (3)** LEC. 3. Examination of political processes over space, from local to the global levels. The course examines the development of political space, geographies of voting, the role of identity in shaping nationalism, and the geopolitical relationship between power and place.

**GEOG 5400 GEOGRAPHY OF NATURAL HAZARDS (3)** LEC. 3. Geography of natural hazards and their impacts on society. Credit will not be given for both GEOG 5400 and GEOG 6400.

**GEOG 5510 HUMAN-ENVIRONMENT INTERACTION (3)** LEC. 3. Departmental approval. Investigation of the inter-relationships between humans and their natural or physical environments.

**GEOG 5550 GEOGRAPHY OF WATER RESOURCES (3)** LEC. 3. Study of water use, management, law, and conflicts at local and international scales. May count either GEOG 5550 or GEOG 6550.

**GEOG 5600 GLOBAL RESOURCES AND THE ENVIRONMENT (3)** LEC. 3. Departmental approval. Global environmental problems such as climate change, ozone and deforestation and international public agencies and private volunteer movements protecting our global commons.

**GEOG 5700 QUANTITATIVE METHODS AND SPATIAL ANALYSIS (3)** LEC. 3. Pr. STAT 2510 or STAT 2513. Pr., STAT 2510 or similar statistics course. Applications of quantitative methods and spatial statistics to environmental, urban and economic systems and implementations of these techniques in GIS and statistical software. Credit will not be given for both GEOG 5710 and GEOG 6710.

**GEOG 5710 GEOGRAPHIC FIELD METHODS (3)** LEC. 1. LAB. 4. Geographic methods and techniques used to conduct field research investigations of human and physical characteristics of the landscape. Credit will not be given for both GEOG 5710 and GEOG 6710.

**GEOG 5800 GEOGRAPHIC THOUGHT (3)** LEC. 3. Departmental approval. Develops effective thinking skills, evaluates written materials in geography, reviews geographical research and produces written reports and papers related to geographic issues.

**GEOG 5820 AERIAL PHOTOGRAPHY AND REMOTE SENSING (4)** LEC. 3. LAB. 2. Departmental approval. Aerial photo and satellite digital interpretation, photogrammetry, remote sensing technology and photogrammetry and related laboratory exercises.

**GEOG 5830 GEOGRAPHIC INFORMATION SYSTEMS (4)** LEC. 3. LAB. 2. Introduction to concepts and techniques used in developing a geographic information system (GIS) for evaluating spatial distribution patterns and spatial relationships.

**GEOG 5850 DRONES AND GEOSPATIAL APPLICATIONS (3)** LEC. 3. LAB. 3. Pr. GEOG 5830 or GEOG 6830. This course will introduce the concepts of drone data collection, processing, and analysis and focus on how these high-resolution datasets can be used in a multitude of geospatial (including GIS and remote sensing) applications. This class will have both in-class and field components. Prerequisite: An Intro to GIS class is preferred, please contact the instructor if you have questions.

**GEOG 5880 ADVANCED GEOGRAPHIC INFORMATION SYSTEMS (3)** LEC. 2. LAB. 2. Pr. GEOG 5830. Advanced concepts and techniques used in the collection and analysis of data for evaluating spatial patterns and process. Credit will not be given for both GEOG 5880 and GEOG 6880.

**GEOG 5890 GIS PROGRAMMING (3)** LEC. 2. LAB. 2. Pr. P/C GEOG 5830. This course is an introduction to programming and scripting for intermediate Geographic Information Systems (GIS) users. Students will learn how to design and write clearly structured scripts in Python using a standalone development environment. Students will develop programs to manage geospatial data, perform geoprocessing analysis, and design custom tools that can be integrated into common GIS software packages. Intro to GIS is a prerequisite which can be met if taken during the same semester (co-requisite). Credit will not be given for both GEOG 5890 and GEOG 6890

**GEOG 5970 SEMINAR IN GEOGRAPHY (3)** LEC. 3. Development of modern geographic thinking with attention to applied research topics. Course may be repeated for a maximum of 6 credit hours.

**GEOG 6010 URBAN GEOGRAPHY AND SUSTAINABILITY (3)** LEC. 3. An introduction to the field of urban geography and urban sustainability. Basic principles and processes that constitute the growth of urban areas, history, impact of urbanization, adaptation and mitigation towards a sustainable future.

**GEOG 6210 CLIMATOLOGY (3)** LEC. 3. Pr., Senior standing or departmental approval. An introduction to the field of climatology. Basic principles and process that constitute the earth's climate system (e.g surface-atmosphere energy budge, the hydrologic cycle, and atmospheric motion, as well as climate change and sea level rise.

**GEOG 6220 GEOMORPHOLOGY (3)** LEC. 3. Basic concepts, terms, and techniques used to identify landforms and their evolutionary processes. Credit will not be given for both GEOG 5220 and GEOG 6220.

**GEOG 6350 ECONOMIC GEOGRAPHY (3)** LEC. 3. Departmental approval. Economic Geography in a global context. Spatial aspects of resource use, agricultural development, manufacturing production and services.

**GEOG 6380 POLITICAL GEOGRAPHY (3)** LEC. 3. Examination of political processes over space, from local to the global levels. The course examines the development of political space, geographies of voting, the role of identity in shaping nationalism, and the geopolitical relationship between power and place.

**GEOG 6400 GEOGRAPHY OF NATURAL HAZARDS (3)** LEC. 3. Geography of natural hazards and their impacts on society. Credit will not be given for both GEOG 5400 and GEOG 6400.

**GEOG 6510 HUMAN-ENVIRONMENT INTERACTION (3)** LEC. 3. Departmental approval. Investigation the inter-relationships between humans and their natural or physical environments.

**GEOG 6550 GEOGRAPHY OF WATER RESOURCES (3)** LEC. 3. Study of water use, management, law, and conflicts at local and international scales. May count either GEOG 5550 or GEOG 6550.

**GEOG 6700 QUANT METH & SPATIAL ANALYSIS (3)** LEC. 3. Pr. STAT 2510 or STAT 2513. or similar statistics course. Applications of quantitative methods and spatial statistics to environmental, urban and economic systems and implementations of these techniques in GIS and statistical software. Credit will not be given for both GEOG 5700 and GEOG 6700.

**GEOG 6710 GEOGRAPHIC FIELD METHODS (3)** LEC. 1. LAB. 4. Geographic methods and techniques used to conduct field research investigations of human and physical characteristics of the landscape. Credit will not be given for both GEOG 5710 and GEOG 6710.

**GEOG 6800 GEOGRAPHIC THOUGHT (3)** LEC. 3. Departmental approval. Develops effective thinking skills; evaluates written materials in geography; Reviews geographical research and produces written reports and papers related to geographic issues.

**GEOG 6820 AERIAL PHOTOGRAPHY AND REMOTE SENSING (4)** LEC. 3. LAB. 2. Departmental approval. Aerial photo and satellite digital interpretation, photogrammetry, remote sensing technology and photogrammetry and related laboratory exercises.

**GEOG 6830 GEOGRAPHIC INFORMATION SYSTEMS (4)** LEC. 3. LAB. 2. Departmental approval. Introduction to concepts and techniques used in developing a geographic information system (GIS) for evaluating spatial distribution patterns and spatial relationships.

**GEOG 6850 DRONES AND GEOSPATIAL APPLICATIONS (3)** LEC. 3. LAB. 3. Pr. GEOG 5830 or GEOG 6830. This course will introduce the concepts of drone data collection, processing, and analysis and focus on how these high-resolution datasets can be used in a multitude of geospatial (including GIS and remote sensing) applications. This class will have both in-class and field components. Prerequisite: An Intro to GIS class is preferred, please contact the instructor if you have questions.

**GEOG 6880 ADVANCED GEOGRAPHIC INFORMATION SYSTEMS (3)** LEC. 2. LAB. 2. Pr. GEOG 6830. Advanced concepts and techniques used in the collection and analysis of data for evaluating spatial patterns and processes. Credit will not be given for both GEOG 5880 and GEOG 6880.

**GEOG 6890 GIS PROGRAMMING (3)** LEC. 2. LAB. 2. Pr. P/C GEOG 6830. This course is an introduction to programming and scripting for intermediate Geographic Information Systems (GIS) users. This course teaches students to design and write clearly structured scripts in Python using a standalone development environment. Students will develop programs to manage geospatial data, perform geoprocessing analysis, and design custom tools that can be integrated into common GIS software packages. Intro to GIS is a prerequisite which can be met if taken during the same semester (co-requisite). Credit will not be given for both GEOG 5890 and GEOG 6890

**GEOG 6970 SEMINAR IN GEOGRAPHY (3)** LEC. 3. Departmental approval. Development of modern geographic thinking with attention to applied research topics. Course may be repeated for a maximum of 6 credit hours.

**GEOG 7930 DIRECTED STUDIES (1-3)** IND/RES. Departmental approval. Individualized literature, field and/or laboratory research not available through regularly offered coursework. Subject matter and credit hours shall be determined by student and directing faculty. Course may be repeated for a maximum of 3 credit hours.

**GEOG 7980 CAPSTONE RESEARCH (1-3)** RES. SU. Departmental approval. enrolled as GEOG MS non-thesis student. Literature, field and/or laboratory research directed toward the completion of capstone project for non-thesis option. Course may be repeated for a maximum of 3 credit hours.

**GEOG 7990 M.S. RESEARCH AND THESIS (1-10)** RES. Research and Thesis. Course may be repeated with change in topics.

**GEOG 8900 DIRECTED STUDIES (1-6)** IND. Provides exposure to discipline-specific research procedures in Earth System Science. Students will work closely with their mentors to explore an Earth-System problem through directed readings, literature searches, field work, laboratory experimentation, and quantitative analysis. Course may be repeated for a maximum of 6 credit hours.