

GEOGRAPHY (GEOGRPY)

Courses

GEOGRPY 100 INTRODUCTION TO GEOGRAPHY 1 Units

Introduction to Geography introduces students to the specialties within geography, outlines the academic tracks within the major and associated requirements, and explores public and private career opportunities in the field of geography. Required of all majors at earliest opportunity.

PREREQ: DECLARED GEOGRAPHY MAJOR OR INSTRUCTOR CONSENT

GEOGRPY 120 GLOBAL CLIMATE SYSTEMS 4 Units

Introduction to global energy, moisture, and circulation systems that drive climates at the global scale. Emphasis will be on the patterns of interannual variability (climate change) and the physical processes that cause those changes. The processes examined will be 1) internal forcing mechanisms (atmosphere, biosphere, cryosphere, and hydrosphere), 2) external forcing mechanisms (solar dynamics, orbital pattern changes, tectonic changes), and 3) human-induced forcing mechanisms (deforestation, atmospheric composition changes, etc.). As part of the lab component, students will apply the concepts learned in the course to complete a small research project that guides them through the scientific process.

PREREQ: MATH 41 WITH A C OR BETTER OR PLACEMENT INTO MATH 139 OR HIGHER

GEOGRPY 210 PHYSICAL GEOGRAPHY 4 Units

A study of selected physical aspects of our geographic environment. Emphasis is given to the origin and characteristic features of topographic, climatic, vegetative and soil regions of the earth and to their interrelationships. The ultimate objective is to provide a foundation upon which to build a better understanding of human interrelationships with the physical environment. Field trips are normally taken.

COREQ: MATH 139 OR MATH 141 OR MATH 142

GEOGRPY 230 HUMAN GEOGRAPHY 3 Units

A systematic study of human land relationships highlighting the diversity of the elements that make up the cultural landscape in various regions.

GEOGRPY 232 GEOGRAPHY OF RACE AND ETHNICITY IN THE UNITED STATES 3 Units

The course takes a geographical approach to the study of ethnic and racial groups in the United States. Native American, African American, Latino/a American, and Asian American groups are studied systematically. Major topics include mobility, culture regions, the cultural landscape created by the various ethnic and racial groups, immigration, segregation, and their associated politics.

PREREQ: SOPHOMORE STANDING

GEOGRPY 245 GENDER AND GEOGRAPHY 3 Units

Human geographies will be studied through the lens of gender along with gender relations at home and abroad. Content is organized according to a variety of spatial scales including the body, home, city, and world. Cases investigated at the global scale include gendered livelihoods and migration, nationalism and war, and environmental issues.

GEOGRPY 250 GEOGRAPHY OF WISCONSIN 3 Units

A systematic treatment of physical and cultural geographic phenomena. Emphasis is placed on the interrelationships and interactions of these phenomena from place to place within the state.

GEOGRPY 252 GLOBAL ENVIRONMENTAL CHALLENGES 3 Units

An introduction to environmental problems and their complexities. Attention is given to alternative solutions to such problems and the implications these alternatives have for the total environment. The course emphasizes the evaluation of the interrelationships between the environmental resource demands of people and the actual resource base of the earth.

GEOGRPY 261 LANDSCAPES OF NORTH AMERICA: PEOPLE AND ENVIRONMENT 3 Units

The United States and Canada have a diverse geography of land, water, and people. This course explores the regional connections between economic activities, cultures, physical characteristics, and natural resources in North America.

GEOGRPY 270 GIS I: MAPPING OUR WORLD 3 Units

Time to get "spatial." Geographic. To see the world in terms of relationships between places and things, patterns and processes. Students will learn how use geographic information systems (GIS) to analyze spatial patterns and communicate through maps. Issues, problems, and examples will be used from a variety of natural resources, social science, and business fields.

COREQ: MATH 139 OR MATH 140 OR MATH 141 OR WAIVER

GEOGRPY 300 SOIL SCIENCE 3 Units

Soil science deals with the systematic description, analysis, and understanding of soils and how they interact with and drive environmental processes and ecosystems. This course will examine the properties, formation, classification, and distribution of soil, stressing the connections between environmental controls on their formation and distribution. Field trips required.

PREREQ: GEOGRPY 120 OR GEOGRPY 210 OR GEOLGY 100 OR GEOLGY 101 OR GEOLOGY 214 OR BIOLOGY 142 OR CHEM 102 OR CONSENT OF INSTRUCTOR

GEOGRPY 310 GEOMORPHOLOGY (LANDFORMS) 3 Units

Landforms and landscape formation is examined through erosional and depositional processes at and within the earth's surface. Special attention is placed on the regional context of landscapes across the United States.

PREREQ: GEOGRPY 210 OR GEOLGY 100 OR GEOLGY 101 OR INSTRUCTOR CONSENT

GEOGRPY 320 WEATHER ANALYSIS 3 Units

This course examines the fundamental properties of the atmosphere through the use of weather data and weather maps. The primary focus is on analyzing and interpreting various types of weather data, through case studies, to understand energy and mass exchanges, wind patterns, air masses, tropical and mid-latitude cyclones, and severe weather phenomena.

PREREQ: GEOGRPY 120 OR GEOGRPY 210 OR CONSENT OF INSTRUCTOR

GEOGRPY 323 WATER RESOURCES 3 Units

Class will investigate the pathways and processes of water transfer and storage in the many reservoirs on earth, along with the impact of human activities on water quality and fluxes. Detail is given to shallow groundwater monitoring and soil indicators of saturation for wetland delineation, anthropogenic effects on streams, and land use issues related to water quality. Field trips normally taken.

PREREQ: GEOGRPY 210 OR GEOLGY 100 OR GEOLGY 101 OR BIOLOGY 142 OR CONSENT OF INSTRUCTOR

GEOGRPY 330 BIOGEOGRAPHY 3 Units

This course provides an introduction to biogeography, the study of distributions of organisms. This course will combine both historical and ecological perspectives in analyzing plant and animal distributions. Human impacts on biotic distributions will also be discussed in some detail.

PREREQ: GEOGRPY 210 OR BIOLOGY 120

GEOGRPY 332 POLITICAL GEOGRAPHY 3 Units

A geographical study of international conflicts and relations, geopolitical strategies and processes, and the variation of political phenomena from place to place in relation to changing economic and cultural environments in the national as well as global contexts.

GEOGRPY 333 GEOGRAPHY OF RELIGION 3 Units

This course examines the role of religion in contemporary American society and in communities around the globe from a geographic perspective. Significant places and spatial patterns associated with religions will be investigated along with the relationship between religion and the political landscape. Students will be expected to identify, visit, and analyze two religious sites in their community.

GEOGRPY 334 HISTORICAL GEOGRAPHY 3 Units

An analysis of the evolution of the historical-geographic patterns of population and human activities in major United States regions. Emphasis is placed upon the identification and preservation of historical landscapes.

PREREQ: MINIMUM JUNIOR STANDING OR GEOGRPY 230 OR INSTRUCTOR CONSENT

GEOGRPY 335 GEOGRAPHY OF POPULATION AND MIGRATION 3 Units

This course examines the economic, social, and political processes that contribute to spatial patterns of population and migration throughout the world. Case studies are used to understand contemporary issues of population growth, labor migration, refugee resettlement, immigration policy, and transnational identity.

GEOGRPY 340 ECONOMIC GEOGRAPHY 3 Units

The study of the spatial organization of economic activities, including patterns of production, exchange and consumption. A broad introduction to locational behavior is presented and applied examples are stressed.

PREREQ: GEOGRPY 230 OR JUNIOR STANDING OR CONSENT OF INSTRUCTOR

GEOGRPY 344 THE URBAN ENVIRONMENT 3 Units

This course provides students with an understanding of the American city from a geographic, sociological and historical perspective. The course emphasizes the spatial form of American cities, but within the framework of a comparative global perspective. The particular forces that produced the spatial form of the American city, and the consequences of these geographic patterns, as well as the connections between the economic, political, and cultural aspects of urban growth and development are highlighted.

PREREQ: MINIMUM SOPHOMORE STANDING OR INSTRUCTOR CONSENT

GEOGRPY 352 GEOHAZARDS 3 Units

The course will focus on the physical processes that create environmental hazards (e.g. earthquakes, volcanoes, severe weather), the primary controls on their frequency and intensity, and how human decision-making can influence the magnitude of impact that they have when they inevitably occur. Comparisons are made between impacts of hazards on developing versus developed countries.

PREREQ: GEOGRPY 120 OR GEOGRPY 210 OR GEOLGY 100 OR GEOLGY 101

GEOGRPY 354 NATURAL HAZARD MITIGATION 3 Units

The course examines four phases of emergency management - mitigation, preparedness, response, and recovery. Topical content includes identifying and classifying natural hazards, mitigation regulations and strategies, government grant programs and assistance, developing risk assessments, and hazard planning. Special emphasis is placed on community resiliency.

PREREQ: MINIMUM JUNIOR STANDING AND (GEOGRAPHY MAJOR OR GEOGRAPHY MINOR OR ENVIRONMENTAL SCIENCE MAJOR OR ENVIRONMENTAL STUDIES MINOR)

GEOGRPY 361 GEOGRAPHY OF SOUTH AND SOUTHEAST ASIA 3 Units

A study of contemporary and historical interrelationships between the natural environment and the economic, political and cultural activities in South and Southeast Asia. Countries studied include: Pakistan, Bangladesh, Sri Lanka, Burma, Thailand, Vietnam, Laos, Cambodia, Indonesia, and the Phillipines.

PREREQ: CORE 140 OR GEOGRPY 230 OR GEOGRPY 252 OR JUNIOR STANDING OR CONSENT OF INSTRUCTOR

GEOGRPY 362 GEOGRAPHY OF EUROPE 3 Units

A study of the nations, regions, cultures, and traditional and emerging spatial relationships in Europe. Physical and cultural patterns and processes are considered as they relate to the distribution of population and industrial and commercial activities. The European Community and Europe's international role and linkages are investigated.

PREREQ: CORE 140 OR GEOGRPY 230 OR JUNIOR STANDING OR CONSENT OF INSTRUCTOR

GEOGRPY 364 GEOGRAPHY OF EAST ASIA 3 Units

A study of contemporary and historical interrelationships between the natural environment and economic, political and cultural activities in East Asia. Countries studied include: China, Taiwan, Mongolia, Japan, and North and South Korea.

PREREQ: CORE 140 OR GEOGRPY 230 OR GEOGRPY 252 OR JUNIOR STANDING OR CONSENT OF INSTRUCTOR

GEOGRPY 365 GEOGRAPHY OF LATIN AMERICA 3 Units

In this course we examine the people and places of Latin America - including Mexico, Central America, South America, and the West Indies - from a variety of perspectives using key geographical concepts.

As a general education course, we borrow from economics, history, demography, political science, and environmental studies, among other disciplines, to get a well rounded understanding of how Latin America has been shaped over the last five centuries. Informed by history and geography, we pay special attention to current events and conditions in the region.

PREREQ: MINIMUM SOPHOMORE STANDING

GEOGRPY 370 GIS II: APPLICATIONS AND DATA 4 Units

The basic principles and operations of geographic information systems (GIS) are presented, including the capture, storage, management, analysis and display of geographic referenced data and their attributes. Laboratory exercises provide extensive hands-on experiences with a number of GIS software packages, including both raster and vector systems.

PREREQ: GEOGRPY 270 OR CONSENT OF INSTRUCTOR

GEOGRPY 377 REMOTE SENSING OF THE ENVIRONMENT 3 Units

An introduction to the images, sensors, and techniques used to gather and process data on the Earth, including aerial photography, electro-optical scanners, and radar systems. The course will focus on the fundamentals of utilizing remotely sensed data in studying both natural and human induced processes impacting the Earth's surface. Computer applications will be extensively utilized.

PREREQ: SOPHOMORE STATUS OR CONSENT OF INSTRUCTOR

GEOGRPY 380 CARTOGRAPHY AND GEOVISUALIZATION 3 Units

With the growing use of maps on the web, cartography is experiencing a modern-day renaissance. Our class goals are to learn the principles of map design and apply them to create production-quality maps. We'll also explore advanced techniques for thematic maps and experiment with tools to create interactive web maps. By the course's end, students will have a portfolio of professional maps to share with employers and friends.

PREREQ: GEOGRPY 270

GEOGRPY 390 SPATIAL SOLUTIONS: GEOGRAPHIC DATA ANALYSIS 3 Units

Geographic data is constantly being collected, disseminated and analyzed by governments, businesses, and citizens. This course trains students in the potential and pitfalls of geospatial data analysis using quantitative techniques and modern software.

PREREQ: GEOGRPY 270 COREQ: GEOGRPY 370 OR CONSENT OF INSTRUCTOR

GEOGRPY 400 CAPSTONE IN GEOGRAPHY 1 Units

Capstone in Geography prepares students for future options within the various fields of Geography/Geology. Portfolio preparation and presentation is emphasized as an essential element of making the transition to careers in both the public and private sector, as well as graduate studies.

PREREQ: GEOGRPY 100, GEOGRPY 210, GEOGRPY 230 OR GEOGRPY 252, GEOGRPY 270 AND SENIOR STATUS OR CONSENT OF INSTRUCTOR

GEOGRPY 420 CLIMATE CHANGE: THE SCIENCE AND IMPACTS 3 Units

This course examines the topic of climate change from many perspectives. First, the science behind climate change is explored to determine the various natural and man-made influences on climate change. Second, the impacts are explored and how they are related to climate change; these topics range from the economic, political, cultural, and ecological.

PREREQ: JUNIOR STATUS OR CONSENT OF INSTRUCTOR

GEOGRPY 423 RIVERS AND FLOODS 3 Units

Streams and rivers are nested into a hierarchy that is organized by landscape characteristics. This course addresses how watersheds and stream processes influence channel form, the linkages among geomorphology and ecology, and flood magnitude and river management. Inferences are made using spatial and temporal scales.

PREREQ: GEOGRPY 210 OR GEOGRPY 323 OR GEOLGY 101 OR GEOLGY 100

GEOGRPY 440 APPLIED GIS FOR SOCIAL AND BUSINESS RESEARCH 3 Units

This project-based course addresses social- and business-related issues through the application of Geographic Information Systems tools. Objectives of this course are to: 1) Introduce the student to site selection techniques; 2) Assess and map geodemographics (e.g., income, race, lifestyle characteristics) for target marketing; 3) To create professional reports and presentations derived from GIS analysis.

PREREQ: GEOGRPY 370 OR CONSENT OF INSTRUCTOR

GEOGRPY 444 CITIES AND SUSTAINABILITY 3 Units

A study of the historical, social and political framework of the urban and regional planning process with primary emphasis on understanding the links between sustainability and the configuration of urban space. Although American cities are emphasized, course content is placed within a broad global context. Students obtain exposure to professional planning approaches and a field trip is often required.

PREREQ: JUNIOR STATUS OR CONSENT OF INSTRUCTOR

GEOGRPY 452 SUSTAINABLE DEVELOPMENT AND HUMAN-ENVIRONMENT GEOGRAPHY 3 Units

Sustainable development works toward a world in which we balance environmental, social, and economic goals. In this class, you'll learn the origins of sustainable development and how its principles are defined and implemented in different communities. Additionally, we'll learn how human-environment geography helps us better understand human actions, cultures, and values and their impacts on environmental, political, and economic systems.

PREREQ: ENVSCI 200 OR GEOGRPY 230 OR GEOGRPY 252 OR BIOLOGY 214 OR JUNIOR STATUS OR CONSENT OF INSTRUCTOR

GEOGRPY 455 TOPICS IN HUMAN GEOGRAPHY Repeatable 3 Units

In-depth examination of a specific issue or theme in human geography. Topics covered will typically focus on emerging national and global issues with a particular emphasis on current research. May be repeated for a maximum of six credit hours (under different subtitles)

PREREQ: GEOGRPY 230, GEOGRPY 252 OR CONSENT OF INSTRUCTOR

GEOGRPY 460 GIS IN WATER RESOURCES 3 Units

The course focuses on the use of GIS to develop solutions to problems associated with water resources. Practical applications will include using GIS to spatially and temporally examine the relationship of watershed characteristics on soil erosion, wetlands, water quality, streamflow, and in-stream habitat. The course combines traditional lectures with computer time in labs equipped with the latest GIS software. Grading is heavily based on completion of projects/technical reports and the quality of GIS outputs.

PREREQ: GEOGRPY 270 AND GEOGRPY 370

GEOGRPY 470 APPLIED ENVIRONMENTAL AND NATURAL RESOURCE GIS 3 Units

This course will provide the knowledge and skills necessary to utilize GIS for solving applied environmental analysis problems. Specifically, the course is designed to 1) identify and resolve environmental and natural resource problems in terms of spatial analysis, 2) explore a conceptual understanding of GIS, 3) provide students with technical instruction in current GIS software.

PREREQ: GEOGRPY 270 AND GEOGRPY 370 OR CONSENT OF INSTRUCTOR

GEOGRPY 477 ADVANCED GEOGRAPHIC INFORMATION SYSTEMS (GIS) 3 Units

Students will learn a variety of skills needed in professional GIS careers including field techniques (unmanned aerial vehicles and differential GPS), web-based GIS (servers and interactive cartography), and GIS automation through scripting (Python and JavaScript). Practical skills are developed through both field and lab work including applied real-world projects.

PREREQ: GEOGRPY 370

GEOGRPY 490 WORKSHOP Repeatable 1-8 Units

Variable topics. Group activity oriented presentations emphasizing 'hands on' and participatory instructional techniques. Repeatable.

GEOGRPY 491 TRAVEL STUDY Repeatable 1-3 Units

Variable topics. Faculty-led field courses.

GEOGRPY 492 FIELD COURSE *Repeatable* 1-6 Units

An introduction to field methods and techniques and their application in the study of a part of the United States or a foreign area. Repeatable.

GEOGRPY 493 INTERNSHIP IN GEOGRAPHY *Repeatable* 1-3 Units

Students will be placed in an outside private or governmental agency where they will utilize geographic techniques in approaching practical problems relevant to the agency's mission. An on-campus seminar with fellow interns and the supervisory instructor is required.

GEOGRPY 494 SEMINAR *Repeatable* 1-3 Units

Variable topics. Group activity. An advanced course of study in a defined subject matter area emphasizing a small group in intense study with a faculty member. Repeatable one time for a maximum of 6 credits in major/degree.

GEOGRPY 496 SPECIAL STUDIES *Repeatable* 1-3 Units

Variable topics. Group activity. Not offered regularly in the curriculum but offered on topics selected on the basis of timeliness, need, and interest, and generally in the format of regularly scheduled Catalog offerings. Repeatable one time for a maximum of 6 credits in major/degree.

GEOGRPY 497 EXCHANGE STUDY *Repeatable* 1-12 Units

Variable topics.

GEOGRPY 498 INDEPENDENT STUDY IN GEOGRAPHY *Repeatable* 1-3 Units

Study of a selected topic or topics under the direction of a faculty member. Repeatable one time for a maximum of 6 credits in major/degree.

PREREQ: 12 CREDITS IN GEOGRAPHY, 2.75 GPA IN GEOGRAPHY AND CONSENT OF INSTRUCTOR

GEOGRPY 498R INDEPENDENT STUDY - UNDERGRADUATE RESEARCH *Repeatable* 1-3 Units

Study of a selected topic or topics under the direction of a faculty member. Repeatable one time for a maximum of 6 credits in major/degree.

GEOGRPY 499 GEOGRAPHY THESIS *Repeatable* 2-3 Units

A substantial research project written as a thesis. Two credits are taken in the first semester and three in the second semester. A proposal must be submitted at the midpoint of the first term and an oral defense takes place at the end of the second term. Available only for senior students.

PREREQ: SENIOR STATUS