

GEOGRAPHY (GY)

GY 120 World Regional Geography (3)

This course examines major world regions, each the unique result of interaction between an environmental setting and human social and economic activity.

GY 195 Explore Seminar (1)

This course provides a forum for assigned readings and discussion of ideas in response to a current issue/event. The topic of the course will vary. May be repeated for a total of three credit hours.

GY 208 Introduction to Digital Mapping and GIS (3)

An introduction to basic digital mapping and analysis techniques involving symbol identification, coordinate location, and direction and distance measurement. Emphasis is upon creating maps using the most up-to-date software and techniques. Students will engage with geographic theory and methodology, stressing its relevance to current work in the discipline. Survey the use of maps to communicate, analyze, and present mapped data to solve spatial problems.

GY 209 Introduction to Digital Mapping and GIS Lab (1)

Corequisite(s): GY 208.

Prerequisite or Labs focus on map design, symbology, geocoding, data acquisition, and other GIS fundamentals. One two-hour lab per week.

GY 210 Earth and Space Science (3)

A one semester overview of Earth including comparison to other planets in the solar system, its landsurface features, its atmospheric patterns, its soils and biomes. This course cannot be used in the Geography major or minor and cannot be used as a prerequisite for upper-level physical geography courses.

GY 220 Human Geography (3)

The study of social and cultural patterns, emphasizing the arrangement and diversity of economic, social, political, religious, and demographic culture traits.

GY 250 Physical Geography I: Atmospheric Patterns and Processes (3)

GY 252 lab is required but not concurrently. Study of the function and distribution of the interrelated processes that shape Earth's weather and the classification and distribution of Earth's climates.

GY 251 Physical Geography II: Landscape Patterns and Processes (3)

GY 253 is required but not concurrently. Study of Earth's soils, biomes and physiographic regions with emphasis on the processes that formed them and their global patterns.

GY 252 Physical Geography Lab I (1)

GY 250 is required but not concurrently. Experiments focus on weather, energy and moisture budgets, and climatic classifications. One two-hour lab per week.

GY 253 Physical Geography Lab II (1)

GY 251 is required but not concurrently. Exercises focus on study of the physical properties of soils, the analysis of biomes, the use of topographic maps to identify land surface features and the identification of physiographic regions. One two-hour lab per week.

GY 254 Honors Physical Geography I: Atmospheric Patterns and Processes (3)

Prerequisite(s): Honors program member or minimum ACT composite score of 25 or minimum SAT total score of 1210.

GY 252 lab is required but not concurrently. Study of the function and distribution of the interrelated processes that shape Earth's weather and the classification and distribution of Earth's climates.

GY 255 Natural Disasters (3)

The earth's processes - including earthquakes, landslides, volcanic eruptions, droughts, wildfires, floods, tropical storms, tsunamis, and climate change that may have negative impacts on our society - are termed "natural disasters." Because the future of our society is highly dependent upon the earth processes and natural resources, it is essential to: 1) examine the origin and distribution of natural hazards, 2) evaluate human influences on Earth systems, 3) mitigate the incidences of major events, and eventually 4) plan our future responses to natural disasters. This course places emphasis on human-environment relationship with the dimensions of societal problem solving, through vulnerability analysis, risk assessment, and management. Students will engage in the assessment of a wide range of potential natural disasters that surround us. They will gain hands-on experience mapping and analyzing them.

GY 302 Remote Sensing (3)

Prerequisite(s): GY 208.

A general introduction to the principles and applications of remote sensing with an emphasis on aerial photography.

GY 303 Outdoor Recreation in Natural Lands (3)

This class presents the environmental impacts of outdoor recreation. That is the study of recreation processes and patterns in the environment. Outdoor recreation activities have a footprint in wild lands and natural areas. Interactions and actions by recreationists alter and enhance natural processes on several fronts. This class will outline the various ways that outdoor recreation impacts the natural environment and best management practices. Topics include: impacts to soils, vegetation, water, and wildlife; and visitor behavior and management strategies.

GY 304 Trail Building and Maintenance (3)

This class presents the core elements of sustainable trail design and examines key landscape properties and processes that influence trail sustainability. Students will learn how to build and maintain sustainable trails. This class will include topics on developing trail plans, choosing trail tools, trail erosion, trail construction, and trail assessments. This course will require some travel and field work.

GY 307 Geographic Information Systems (WI) (3)

Prerequisite(s): GY 208. (Writing Intensive Course)

Introduction to the fundamentals of Geographic Information Systems (GIS), including essential cartographic acquisition, processing, management, manipulation, analysis, and generation of digital spatial data. Topics addressed include GIS terminology, data sources, data conversion and input methods, raster and vector data, metadata, an introductory look into working with spatial databases, and spatial analysis. (Writing Intensive Course)

GY 320 Political Geography (3)

A study of the spatial aspects of political phenomena from the international to the local scale. Suggested background: GY 220.

GY 331 Climatology (3)

A study of climates, how they are classified, and their effect upon human activity.

GY 333 Meteorology (3)

Recommended: GY 250. The study of weather types and their causes, weather instrumentation, the construction and interpretation of weather maps, analog and synoptic forecasting, and weather modification.

GY 341 Economic Geography (3)

(3). A survey of the factors which influence the location of economic activities with emphasis on the application of various elementary techniques designed to determine the relative economic potential of any place.

GY 351 Advanced Regional Study (3)

Examination of the interrelations among various physical and cultural elements that make regions of the world distinctive. Regional focus varies. See instructor. May be duplicated for credit for a total of 12 semester hours.

GY 352 Geomorphology (3)

Prerequisite(s): GL 241 or GY 251.

Geomorphology examines processes that have shaped, and continue to shape, the landscape around us. Resulting landforms and the forces involved are explored using both qualitative and quantitative methods. This course considers issues such as land use and land cover, and the ongoing interaction between human activity and geomorphic processes in the local region. Landforms and processes are analyzed at various temporal and spatial scales, and in terms of relevant theories and principles.

GY 361 Geography of the Arab World (3)

This course employs a macro geographical (regional and systematic) approach that introduces the students to the process of social and political change in the Arab World. The focus will be on the political, social, environmental and economic positions and interaction of the major players within the region. We look at the complexity of the region and its historical-cultural specifics. From a geopolitical perspective we survey recent socioeconomic and political exchanges and look at events that have begun to transform the contemporary Arab World, most notably the "Arab Spring" and the uprisings of Summer and Fall of 2012 and how these events are recursors to continued change.

GY 366 Sports Geography (3)

The purpose of this course is to explore the intersection of sports and geography. Modern sports have developed over the past two centuries into a multi-billion dollar global industry. The geographic basis of sports is widely apparent at a variety of geographic scales: from the global, national and regional scales as demonstrated by international competition among countries, the locational strategies of professional franchises, sports regions, fans' attachments to teams in specific locations, and recruiting patterns, down to the micro geographical scale as evident in the geographically delimited areas of sports fields and micro-segregation based on class found in many professional (and collegiate) sporting venues (i.e., luxury boxes versus box seats versus general admission, etc.).

GY 398 National Parks Interpretation (3)

Students will receive intensive training preparing them to work as student interns at Little River Canyon National Preserve. Several days of travel to Little River Canyon will be required.

GY 399 Study Tour (3)

Prerequisite(s): Approval of instructor.

Topics, excursions, and requirements determined by department. May be duplicated for credit; however, only 3 credits may be applied toward any major or minor. Infrequently scheduled and subject to minimum and maximum numbers. Advance deposit required.

GY 401 Practicum in Geography (3)

Prerequisite(s): Approval of instructor.

This course provides opportunity to gain on-the-job experience with a firm or government agency. May be duplicated for credit for a total of 6 semester hours. Grades: Pass/Fail.

GY 403 Independent Study (3)

Prerequisite(s): Approval of instructor required.

This course gives the advanced student opportunity to pursue directed research. May be duplicated for credit for a total of six (6) semester hours. Grades: Pass/Fail.

GY 406 Digital Image Analysis (3)

Prerequisite(s): GY 302.

Advanced instruction in multi-spectral, thermal and microwave sensing of the geographic environment. Emphasis on analysis of digital imagery.

GY 407 Advanced Geomorphology (3)

Prerequisite(s): GY 352.

This course covers the erosional, transportation, and depositional processes responsible for shaping Earth's surface. Specifically, the course reviews hydrologic geomorphology (surface water, groundwater, and glacial ice), aeolian and desert geomorphology, plate tectonics, volcanism, and hillslope processes. This course will combine lectures, readings based on recent contributions to the field, discussions, field data collection, calculations, and other activities.

GY 409 Music Geography (3)

This course explores the reciprocal relationship between music and geography. Music plays an active role in the development and depiction of politics, economics, human-environment interactions, and local and global communications in place. Through music individuals create connections to the landscape, neighborhoods, architecture, identities, and therefore places. This course investigates the geography of music, with particular emphasis on the development of the discipline, types of music used in a North American context, the scales of geographic identities crafted and connected through music, the role of music in place, and the power of music for the creation of identity.

GY 431 Topics in Physical Geography (WI) (3)

Advanced geographic study of various facets of the natural environment; topic selection varies; see instructor. May be duplicated for credit for a total of 12 semester hours. (Writing Intensive Course)

GY 453 Analyzing Spatial Networks (3)

Prerequisite(s): GY 307.

Undergraduate Introduction to topology theory and its employment in GIS network analysis. Emphasis on methods of determining efficient paths, modeling network flows, and creating efficient service areas for organization entities.

GY 454 Site Location Analysis (3)

Prerequisite(s): GY 307.

Emphasis on evaluating existing site location efficiencies, determining of appropriate point site and area site locations for organizational entities, and analyzing environmental impact analyses using GIS.

GY 466 Topics in Cultural Geography (WI) (3)

Advanced geographic study of various facets of human culture. Topic selection varies. May be duplicated for credit for a total of 12 semester hours. (Writing Intensive Course)

GY 475 Natural Hazards (3)

An introduction to natural hazards, their causes, distribution and impacts. Focus on human perception, vulnerability and risk analysis.

GY 490 Colloquium (1)

Prerequisite(s): A completed piece of research must be submitted prior to enrollment in this course.

Results of a basic research project in geography are presented in a conference setting using PowerPoint or equivalent software. Grades: Pass/Fail.