GEOGRAPHY (GEO) (GEO)

GEO 101 Environmental Geography 3 cr
Study of the Earth's environment, specifically: Weather, Climate Change, Vegetation, and Ecosystem Science with an emphasis on connections between the atmosphere, biosphere, and human influence.
Corequisite: GEO 101L

GEO 101L Environmental Geography Lab 1 cr
Laboratory exercises associated with GEO 101. GEO 101 must be taken concurrently. Together, GEO 101 and GEO 101L count as one laboratory science course, partially fulfilling general education requirements.
Corequisite: GEO 101

GEO 102 Earth and the Environment 3 cr
Study of the Earth's environment, specifically volcanoes, earthquakes, and landforms created by water, ice, and wind, emphasizing human influence on the physical environment and vice versa.
Corequisite: GEO 102L

GEO 102L Earth and the Environment Lab 1 cr
Laboratory exercises associated with GEO 102. GEO 102 must be taken concurrently. Together, GEO 102 and GEO 102L count as one laboratory science course, partially fulfilling general education requirements.
Corequisite: GEO 102

GEO 114 People, Places, Environment 3 cr
Explore human interaction and manipulation of the environment through population, economics, politics, urban development, and local cultures, emphasizing geography's spatial approach to solving societal problems.

GEO 115 World Regional Geography 3 cr
A survey of the major regions of the world, excluding North America, and the interrelationship of environmental, cultural, economic, and political factors that characterize each. Core Course.

GEO 201 Geography Orientation 1 cr
This 1-credit hour course will cover topics that are important to geography students, such as: which geography courses to choose, the major sub-disciplines of geography, and career choices available for geography majors. You will meet the Geography faculty as they give brief overviews of the courses they teach and their research interests. Field trips, which will generally take place during the class time, are included in the course and will showcase examples of the research interests of faculty members. Core Course.

GEO 310 Environmental Earth Science 3 cr
A spatial perspective on major global environmental problems. Topics include population pressure; loss of biodiversity; ozone depletion; global warming; water, energy, and mineral resources, food supplies, waste disposal, geologic hazards, and political/economic forces (identical to GY 310).
Prerequisite: (GY 101 Minimum Grade of D or GY 111 Minimum Grade of D) or GEO 101 Minimum Grade of D or GEO 102 Minimum Grade of D
Cross-Listed: GY 310

GEO 312 World Economic Geog 3 cr
Emphasis is placed on the location, spatial distribution, and spatial interaction of economic activities within a global context. Topics covered include population, natural resources, primary, secondary and tertiary activities, development and international trade and aid. Students will write technical reports using word processing and spreadsheet software.
Prerequisite: GEO 114 Minimum Grade of D and (EH 102 Minimum Grade of C or EH 105 Minimum Grade of C)

GEO 313 Geography of U.S. and Canada 3 cr
An analysis of the environmental, historical, cultural, and economic factors that create the spatial patterns, development processes and distinctiveness of Canada and the United States.

GEO 314 Geography of Europe 3 cr
An analysis of the environmental, historical, social and economic factors that create the diversity of countries and their unique spatial characteristics on the subcontinent of Europe.

GEO 315 Geography of Latin America 3 cr
A systematic survey of Latin America landscapes. Attention is directed to natural resources, human activities and regional differentiation.
Prerequisite: GEO 101 Minimum Grade of D or GEO 102 Minimum Grade of D or GEO 114 Minimum Grade of D or GEO 115 Minimum Grade of D

GEO 320 Alabama Geography 3 cr
Spatial study of physical and human features in Alabama. Includes geomorphology, climate, vegetation, agriculture, development, population, and environmental issues within the state.
Prerequisite: (GEO 101 Minimum Grade of D or GEO 102 Minimum Grade of D or GEO 114 Minimum Grade of D or GEO 115 Minimum Grade of D) and (EH 102 Minimum Grade of D or EH 105 Minimum Grade of D)

GEO 321 Nat'l Parks Conservation 3 cr
An analysis of the motives and processes for establishing national parks and nature reserves, the primary conservation and preservation issues they have and the influences of ecology, politics, and culture on their planning and management. U.S. national parks are emphasized.
Prerequisite: (EH 102 Minimum Grade of C or EH 105 Minimum Grade of C) and (GEO 101 Minimum Grade of D or GEO 102 Minimum Grade of D or GEO 114 Minimum Grade of D or GEO 115 Minimum Grade of D)

GEO 331 Computer Graphs and Maps 4 cr
Introductory review of the application of computers to the production of graphs and thematic maps for geographical analysis. Core course. Meets computer proficiency requirement for Geography majors.

GEO 332 Remote Sensing I 4 cr
Interpretation of maps, air photos and satellite images (identical to GY 332). Core course.
Cross-Listed: GY 332

GEO 342 Severe Weather 3 cr
A study of the cause, structure and impact of tornadoes, hurricanes, thunderstorms, and severe weather systems (Identical to MET 342). Prerequisite: GEO 353 or MET 353. Minimum grade of 'C' needed in course prerequisite.
Prerequisite: (GEO 353 Minimum Grade of C or MET 353 Minimum Grade of C)
Cross-Listed: MET 342

GEO 353 General Meteorology 4 cr
An overall view of the field of meteorology for science majors and minors. This course uses a quantitative approach to study the composition of the atmosphere, atmospheric processes, global circulation, and storm development (identical to MET 353). Prerequisites: MET 140, MET 140L, and MA 112. Minimum grade of 'C' needed in course prerequisites.
Prerequisite: (MA 112 Minimum Grade of C or MA 171 Minimum Grade of C) or (MA 113 Minimum Grade of C or MA 172 Minimum Grade of C) or (MA 125 Minimum Grade of C or MA 132 Minimum Grade of C) and (MET 140 Minimum Grade of C and MET 140L Minimum Grade of C)
Cross-Listed: MET 353

GEO 353L General Meteorology Lab 1 cr
Laboratory exercises associated with GEO 353. Particular attention is given to hands-on weather analysis of meteorological charts.
Corequisite: GEO 353
Cross-Listed: MET 353L

GEO 365 Urban Geography and Planning 3 cr
Concentrates upon the evolution and function of the urban spatial system, and upon the internal spatial structure of an urban area's residential, commercial, and industrial land use. This course also introduces basic concepts and strategies of urban and regional planning with a focus on the domestic realm.
Prerequisite: GEO 114 Minimum Grade of D or GEO 115 Minimum Grade of D

GEO 370 International Tourism 3 cr
The study of the components of the Tourism industry, their spatial distribution, the environmental and cultural effects of Tourism, and the requisites and techniques for planning tourism development.
Prerequisite: (GEO 101 Minimum Grade of D or GEO 102 Minimum Grade of D or GEO 114 Minimum Grade of D or GEO 115 Minimum Grade of D)

GEO 381 Cultural Geography 3 cr
Study of the development and differentiation of cultural landscapes and the economic, political, technological, and cultural processes that shape them. Preerequisite: GEO 114 or GEO 115.
Prerequisite: (GEO 113 Minimum Grade of D or GEO 115 Minimum Grade of D) or GEO 114 Minimum Grade of D

GEO 404 Geography of Alcohol 3 cr
By synthesizing ideas considered in lectures, readings, discussions with industry experts, and through practical lab experiments, students will learn about the historical, political, economic, and environmental footprint of the global alcohol industry and its place in society.
Prerequisite: (GEO 101 Minimum Grade of C or GEO 102 Minimum Grade of C or GEO 114 Minimum Grade of C or GEO 115 Minimum Grade of C)

GEO 405 Natural Hazards and Disasters 3 cr
An overview of natural hazards and disasters from a scientific perspective that focuses on the occurrence and impact of environmental hazards, such as volcanoes, earthquakes, tsunamis, floods, mass movements, and coastal hazards. Mitigation techniques used to make the human environment more resilient against natural hazards are also covered. In addition, the viewpoint of hazard and emergency managers toward natural disasters will be studied.
Prerequisite: GEO 102 Minimum Grade of C or (GY 101 Minimum Grade of C or GY 111 Minimum Grade of C)

GEO 410 Biogeography 3 cr
Analysis of spatial patterns of life on earth. Biogeography emphasizes the influence of the physical environment, paleogeography, and past and possible future climate change on the biomes and biogeographic realms.
Prerequisite: GEO 101 Minimum Grade of D

GEO 411 Soils 3 cr
A review of soil formation, processes and properties (identical to GY 411).
Prerequisite: GEO 102 Minimum Grade of D
Cross-Listed: GY 411

GEO 414 Urban Geography & Planning 3 cr
Concentrates upon the evolution and function of the urban spatial system, and upon the internal spatial structure of an urban area's residential, commercial, and industrial land use. This course also introduces basic concepts and strategies of urban and regional planning with a focus on the domestic realm.
Prerequisite: (GEO 114 Minimum Grade of D or GEO 115 Minimum Grade of D)

GEO 417 Health and Place 3 cr
This course illustrates how geographic concepts help us better understand health and well-being, through the exploration of theories, methodologies, and contributions of medical geography to the social and health sciences. Using spatial tools, such as mapping and Geographic Information Systems, this course will examine the geographical patterns of health and disease. This course encourages students to examine the theoretical and technological tools geography brings to topics related to health and provides them with a foundation for studying geographic differences in health and health services.
Prerequisite: EH 102 Minimum Grade of C

GEO 420 Geostatistics 3 cr
Applied bivariate and multivariate statistics to problems in Geography, Geology, and Meteorology; parametric and non-parametric procedures in correlation, regression, analysis of variance, etc. Time series analysis, trend surface analysis, and kriging and analysis of spatial (map) data. Identical to GY 420.
Prerequisite: ((GY 111 Minimum Grade of C and GY 111L Minimum Grade of C) or GY 101 Minimum Grade of C) or ((GY 112 Minimum Grade of C and GY 112L Minimum Grade of C) or GY 103 Minimum Grade of C) and (MA 112 Minimum Grade of C or MA 171 Minimum Grade of C) or (ST 210 Minimum Grade of C or ST 175 Minimum Grade of C)
Cross-Listed: GY 420

GEO 435 Research Methods Geography 3 cr
This course serves as an introduction to geography as a research discipline. Emphasis is placed on geographic problem solving, data collection, data analysis, and reporting. Micro computer oriented statistical and mapping packages will be used to analyze geographic data. Prerequisites: Junior standing. Core course.
Prerequisite: ST 210 (may be taken concurrently) Minimum Grade of D

GEO 440 Coastal Zone Management 2 cr
A review of ecological features and of management policies for coastal communities with a description of relevant federal and state programs. Taught only at Dauphin Island Sea Lab.

GEO 441 Coastal Climatology 2 cr
Study of the controlling factors and features of the world's climates, with particular attention to coastal areas, and application and interpretation of climate data. Taught only at Dauphin Island Sea Lab.

GEO 442 Remote Sensing II 4 cr
Analysis of remotely sensed digital data for detection and mapping of earth resources (identical to GY 442). Prerequisite: GEO 332 or GY 332. Minimum grade of 'B' needed in course prerequisite.
Prerequisite: GEO 332 Minimum Grade of B or GY 332 Minimum Grade of B
Cross-Listed: GY 442

GEO 443 Climatology-W 3 cr
Analysis of global climate as aggregate weather. Component elements, factors controlling distribution, resulting area patterns, and climatic classification are studied (identical to MET 443). Fee
Prerequisite: MET 140 Minimum Grade of C or GEO 101 Minimum Grade of C
Cross-Listed: MET 443

GEO 460 Introduction to GIS 4 cr
Fundamentals of Geographic Information Systems technology, including software functionality (ArcGIS), data processing, cartography and spatial analysis (identical to GY 460.) Prerequisite: CIS 150 with a grade of B or better or passing the computer proficiency exam.
Prerequisite: CIS Proficiency Exam P or CIS 150 Minimum Grade of B
Cross-Listed: GY 460

GEO 461 GIS Apps I-Environment 4 cr
Application of Geographic Information Systems to studies of the natural environment (identical to GY 461). Permission Prerequisite: GEO 460 or GY 460 or permission of instructor. Minimum grade of 'B' needed in course prerequisite. Fee
Prerequisite: GEO 460 Minimum Grade of B or GY 460 Minimum Grade of B
Cross-Listed: GY 461

GEO 462 GIS Apps II-Business/Social Sc 4 cr
Application of Geographic Information Systems to Business and the Social Sciences. Prerequisite: GEO 460 or GY 460 or permission of instructor. Minimum grade of 'B' needed in course prerequisite.
Prerequisite: GEO 460 Minimum Grade of B or GY 460 Minimum Grade of B

GEO 475 Field Work in Geography 1-6 cr
Students will travel to pre-determined location to perform field work for a project that was pre-determined by the professor and student. Once in the field, students will gather data and learn about the landscape(s).
Prerequisite: EH 102 Minimum Grade of D

GEO 485 Seminar Geographic Thought - W 3 cr
This course serves as the capstone course for geography majors in which students integrate their knowledge of human and physical geography, as well as the geographic techniques, to investigate real-world problems with a spatial component. Students gain experience in working in small groups and in written and oral presentation of project results. Students will also lead discussions on key or pertinent research articles in geography. Taught Spring only.
Prerequisite: GEO 435 and GEO 331 and GEO 332

GEO 490 Special Topics 2-4 cr
Geographic topics not covered in current geography courses. May be repeated when content varies for a maximum of 8 credit hours.

GEO 492 Seminar - 1-3 cr
Departmental seminar investigating a selected field of geography. May be repeated when content varies for a maximum of 3 credit hours.

GEO 494 Directed Studies 1-4 cr
Independent research under the direction of a member of the geography faculty. No more than 8 hours of Directed Studies is allowed.

GEO 496 Internship in Geography 1-4 cr
On-the-job learning through occupational or professional work with an approved firm or agency. Open to geography majors only. No more than 4 hours of Internship credit is allowed.

GEO 542 Remote Sensing II 4 cr
Analysis of remotely sensed digital data for detection and mapping of earth resources. Credit for both GEO 442 or GY 442 and GEO 542 is not allowed.Prerequisite: GEO 332 or GY 332. Special project required.
Prerequisite: GEO 332 Minimum Grade of B or GY 332 Minimum Grade of B
Cross-Listed: GEO 442, GY 442

GEO 560 Introduction to GIS 4 cr
Fundamentals of Geographic Information Systems technology, including software functionality (ArcGIS), data processing, cartography and spatial analysis. Credit for both GEO 460 or GY 460 and GEO 560 is not allowed. Prerequisite: CIS 150 with a grade of 'B' or better or computer proficiency exam. Special project required.
Prerequisite: CIS 150 Minimum Grade of B or CIS Proficiency Exam P
Cross-Listed: GEO 460, GY 460

GEO 561 GIS Apps I-Environment-C 4 cr
Application of Geographic Information Systems to studies of the natural environment. Credit for both GEO 461 or GY 461 and GEO 561 is not allowed.Prequisite: GEO 560 or GEO 460 or GY 460 with a grade of 'B' or better or permission of instructor. Special project required.
Prerequisite: GEO 560 Minimum Grade of B or GEO 460 Minimum Grade of B or GY 460 Minimum Grade of B
Cross-Listed: GEO 461, GY 461

GEO 562 GIS Apps II-Business/Social 4 cr
Application of Geographic Information Systems to Business and the Social Sciences. Credit for both GEO 462 and GEO 562 is not allowed.Prerequisite: GEO 560 or GEO 460 or GY 460 with a grade of 'B' or better or permission of instructor. Special project required.
Prerequisite: GEO 560 Minimum Grade of B or GEO 460 Minimum Grade of B or GY 460 Minimum Grade of B
Cross-Listed: GEO 462

GEO 590 Sp Top - 1-6 cr
An in-depth course for advanced students in geography. Topics and titles will be selected to examine the subject matter in an area of current interest to students and in an area of particular faculty expertise. Includes specialized topics not currently listed in the Bulletin course offerings.

GEO 594 Grad Dir Study in Geography- 1-4 cr
Independent research in Geography at the graduate level. May be used to learn new techniques or explore research questions of special interest under the direction of a member of the Geography graduate faculty.