GEOGRAPHY (GEO)

GEO 502 Geography of Appalachia **3 Credit hours**
A study of the geography of Appalachia, including landforms, climate, settlement patterns, population, economics, resources, politics, and environmental changes.
Grade Mode: Normal Grading Mode

GEO 504 Geography of Europe **3 Credit hours**
An examination of the geography of Europe focusing on contemporary issues, including climate, culture, economics, environmental change, everyday life, international relations, landforms, language, politics, population, religion, and urbanization.
Grade Mode: Normal Grading Mode

GEO 505 Political Geography **3 Credit hours**
An examination of contemporary patterns, processes, and problems of political geography in global perspective, including globalization, colonialism, imperialism, geopolitics, nationalism, diplomacy, international borders, governance, political representation, and future projections.
Grade Mode: Normal Grading Mode

GEO 506 Population Geography **3 Credit hours**
An examination of contemporary patterns, processes, and problems of population geography in global perspective, including fertility, mortality, demographic change, migration, malnutrition, urbanization, natural resource sustainability, and future projections.
Grade Mode: Normal Grading Mode

GEO 508 Geog of South & Middle America **3 Credit hours**
A study of settlement, transportation, manufacturing agriculture, geopolitics and natural resources of South and Middle American countries.
Grade Mode: Normal Grading Mode

GEO 510 Urban Geography **3 Credit hours**
Study of the evolution, morphology and land use, functions, and problems of urban areas, with emphasis on governance, planning, and the social and environmental impacts of urbanization.
Grade Mode: Normal Grading Mode

GEO 511 Health and Medical Geography **3 Credit hours**
An examination of contemporary issues and problems in health and medical geography, including the spatial aspects of global health, health care policy, and disease origins, diffusion, and ecology.
Grade Mode: Normal Grading Mode

GEO 522 Environmental Geography **3 Credit hours**
Geographical survey of enviromental changes caused by human activities. Focus on resource availability and use; pollution of air, water, and biosphere; energy problems, and human interaction with natural movement.
Grade Mode: Normal Grading Mode

GEO 523 Cartography & GIS **3 Credit hours**
An introduction to cartography as the cornerstone of geographic information systems/science. Students will learn GIS-based map making, interpretation, and design. The course explores cartographic techniques to represent and visualize data.
Grade Mode: Normal Grading Mode

GEO 524 Transportation Geography **3 Credit hours**
A geographic analysis of transportation and its spatial organization. Concepts, models, and analytical methods related to traffic demand, network configuration, and allocation of transport facilities are covered.
Grade Mode: Normal Grading Mode

GEO 525 Climatology **4 Credit hours**
A study of elements of weather and climate, methods of climatic classification, and distribution and characteris- tics of world climatic regions.
Grade Mode: Normal Grading Mode

GEO 526 Principles of GIS **4 Credit hours**
This course allows incoming graduate students to obtain foundational GIS skills required to succeed in more specialized graduate level GIScience courses.
Grade Mode: Normal Grading Mode

GEO 527 Principles of GIS II **4 Credit hours**
Students apply GIS principles and techniques to geoprocess and manipulate geographic data, including topics such as geodatabase management, python scripting, model building, web mapping and data services, and spatial analysis.
Pre-req: GEO 523 with a minimum grade of D or GEO 526 with a minimum grade of D or GEO 529 with a minimum grade of D or GEO 530 with a minimum grade of D or NRRM 523 with a minimum grade of D or NRRM 533 with a minimum grade of D.
Grade Mode: Normal Grading Mode

GEO 529 Location Analysis and GIS **4 Credit hours**
Concepts, models, and methods of geographic location analysis of natural resources extraction, manufacturing, services, retail and market area analytics, and logistics using GIS.
Pre-req: GEO 523 with a minimum grade of D or GEO 526 with a minimum grade of D or GEO 527 with a minimum grade of D or GEO 530 with a minimum grade of D or NRRM 523 with a minimum grade of D or NRRM 533 with a minimum grade of D.
Grade Mode: Normal Grading Mode

GEO 530 GIS-Raster Analysis **4 Credit hours**
GIS raster analysis, including local, neighborhood, and zonal operations, terrain analysis, building raster databases, distance modeling, and surface interpolation. Data collection and input from readily available sources, creation of custom data using GPS, and advanced spatial analysis using GIS.
Pre-req: GEO 526 or GEO 529.
Grade Mode: Normal Grading Mode

GEO 531 Remote Sensing & Photogram **4 Credit hours**
Scientific study of the earth using images and data captured using satellite-or aircraft-borne sensors, with emphasis on issues of acquisition, photogrammetric interpretation, spatial analysis, and application.
Grade Mode: Normal Grading Mode

GEO 532 Enterprise GIS **3 Credit hours**
Principles and techniques for planning, implementing, and managing Geographic Information Systems technologies in a firm or agency.
Grade Mode: Normal Grading Mode

GEO 533 GPS & Mobile Geospatial T **3 Credit hours**
An analysis of the design and deployment of Global Navigation Satellite Systems such as GPS (Global Positioning System) and their application to mobile map systems.
Grade Mode: Normal Grading Mode

GEO 534 Flood Hazards and GIS **3 Credit hours**
Application of principles of flood hazards preparation, disaster management, and mitigation using Geographic Information Systems (GIS).
Grade Mode: Normal Grading Mode

GEO 540 Spatial Statistics and GIS **4 Credit hours**
Statistical methods applied to problem solving in geography and using GIS for display and analysis. Primary focus on descriptive and inferential spatial statistics, mapping, and spatial analysis of data.
Grade Mode: Normal Grading Mode

GEO 554 Drones:Remote Sensing & GIS **3 Credit hours**
Learn FAA rules and safety procedures; prepare for Remote Pilot licensing exam; operate drones to collect remote sensing data; process imagery for analysis; integrate sUAS imagery with existing GIS data.
Grade Mode: Normal Grading Mode

GEO 560 Weather Analysis **4 Credit hours**
Introduction to reading weather maps and meteorological analysis techniques including satellite and radar image interpretation and numerical weather prediction.
Grade Mode: Normal Grading Mode

GEO 580 Special Topics **1-4 Credit hours**
Selected geography subjects to cover unusual geography topics not in the regular course offerings of the depart- ment.
Grade Mode: Normal Grading Mode

GEO 581 Special Topics **1-4 Credit hours**
Selected geography subjects to cover unusual geography topics not in the regular course offerings of the depart- ment.
Grade Mode: Normal Grading Mode

GEO 582 Special Topics **1-4 Credit hours**
Selected geography subjects to cover unusual geography topics not in the regular course offerings of the depart- ment.
Grade Mode: Normal Grading Mode

GEO 583 Special Topics **1-4 Credit hours**
Selected geography subjects to cover unusual geography topics not in the regular course offerings of the depart- ment.
Grade Mode: Normal Grading Mode

GEO 585 Independent Study **1-4 Credit hours**
Grade Mode: Normal Grading Mode

GEO 586 Independent Study **1-4 Credit hours**
Attributes: No Textbook Required
Grade Mode: Normal Grading Mode

GEO 587 Independent Study **1-4 Credit hours**
Grade Mode: Normal Grading Mode

GEO 588 Independent Study **1-4 Credit hours**
Grade Mode: Normal Grading Mode

GEO 601 Colloquium in Geography **1-3 Credit hours**
Speaker series introducing and sharing knowledge and experiences with geographic focus. Students are to learn from the knowledge and experience of faculty members, graduate students, alumni, and scholars.
Grade Mode: Credit/No Credit Grade Only

GEO 607 Economic Geography **3 Credit hours**
Topics in economic geography including industrial location, transportation systems, economic development, international trade relationships and globalism.
Grade Mode: Normal Grading Mode

GEO 615 Geographic Thought **3 Credit hours**
Survey of the history, literature, prominent individuals, and major paradigms in geography. Review of the major concepts in geography and an introduction to various methods of geographic inquiry.
Grade Mode: Normal Grading Mode

GEO 616 Geographical Research Methods **3 Credit hours**
Students examine/practice four research methods in geography--qualitative, quantitative, GIScience, and field/lab methods--and learn to choose among them and use them for their own research and analysis.
Grade Mode: Normal Grading Mode

GEO 617 Seminars in Geography **1-3 Credit hours**
Selected geography subjects/topics not included in the regular course offerings of the department are considered, using a seminar approach to learning.
Grade Mode: Normal Grading Mode

GEO 618 Seminars in Geography **1-3 Credit hours**
Selected geography subjects/topics not included in the regular course offerings of the department are considered, using a seminar approach to learning.
Grade Mode: Normal Grading Mode

GEO 619 Seminars in Geography **1-3 Credit hours**
Selected geography subjects/topics not included in the regular course offerings of the department are considered, using a seminar approach to learning.
Grade Mode: Normal Grading Mode

GEO 620 Problems in Environ Geog **3 Credit hours**
Geographic aspects of world environmental problems including such topics as global warming, acid rain, energy supplies, population growth and soil depletion.
Grade Mode: Normal Grading Mode

GEO 623 Regions of North America **3 Credit hours**
This seminar course examines regional geographies of North America with an emphasis on the research and methods for delineation of regions.
Grade Mode: Normal Grading Mode

GEO 631 Applied GIS Projects **3 Credit hours**
Use of advanced GIS techniques to solve community-service research problems.
Pre-req: GEO 530.
Grade Mode: Normal Grading Mode

GEO 634 GIS Databases & Programming **3 Credit hours**
Configuration and management of geospatial databases. Python scripting for analysis, geoprocessing, and workflow automation within a GIS environment.
Grade Mode: Normal Grading Mode

GEO 679 Portfolio and Career Profile **1-4 Credit hours**
Students compile a Portfolio of work completed during the degree program, complete a written exam project, and create/enhance their Career Profile.
Grade Mode: Normal Grading Mode

GEO 681 Thesis **1-6 Credit hours**
Grade Mode: Normal Grading Mode

GEO 690 Internship in Geography **1-6 Credit hours**
Student will be employed a minimum of 300 hours with an agency approved by geography department. Faculty advisor and agency will consult periodically on student progress.
Attributes: No Textbook Required
Grade Mode: Credit/No Credit Grade Only