GEOGRAPHY & ENV PLANNING (GE)

GE 2050 GIS I: Introduction to Geographic Information Systems (4)
An introduction to the theoretical and applied aspects of Geographic Information Systems (GIS). Students learn about the principles and implementation of GIS and obtain practical experience in the application of GIS to real-world problems. Includes vector/raster data, geodatabase management, coordinate system, datum, map projections, GPS, 3D visualization, and quantitative data analysis and visualization in GIS. Not open to students who have earned credit for GE 3270. Falls and Springs. (QRCO) (TECO)

GE 2200 Human Geography (4)
This course provides students with an opportunity to view a variety of cultural topics from a geographic perspective. We look at regions of culture (including economy, politics, health, development), and investigating the processes that have influenced these patterns. Students will have opportunities to connect the course content to areas of their own major or interests. Falls.

GE 3030 Urban Geography (3)
An examination of the evolution of the contemporary urban system, emphasizing the role of cities and metropolitan areas as concentrations of social and economic activity. Particular focus is given to the historical evolution of urban form and function, including patterns of land use, residential change, commercial activity, manufacturing and transportation. While the primary subject is the American city, some comparisons to international urbanization are made. Falls.
Prerequisite(s): Junior status.

GE 3050 GIS II: Advanced Geographic Information Systems (4)
Advanced topics in understanding and using geographic information systems (GIS). Emphasizes the organizational and legal context of GIS use, professional issues, communication between different GIS software, and GIS project implementation and management. Covers advanced vector/raster data analysis, GPS data management, spatial analysis, aerial photo interpretation, satellite images, 3D visualization, and GIS modeling. Fall and Springs.
Prerequisite(s): GE 2050 or GE 3270.

GE 3080 Economic Geography (4)
Introduces students to the major themes and issues addressed in critical economic geography. Focuses on development, resources, theories, and the impacts of economic systems across the global landscape. Gives students a greater appreciation and understanding of the myriad of cultural political and economics forces shaping our world. Fall of even years.

GE 3970 Internship (1-6)
Students engage in an individualized work program at an agency that emphasizes some aspects of planning, tourism, GIS or other related to their field(s) of study. Minimum time required is 10 hours/week for 1 semester. Repeatable for a maximum of 6 credits.
Prerequisite(s): approval of the discipline's Internship Program Coordinator.

GE 4010 Remote Sensing and Digital Image Processing (4)
An introduction to the basics of remote sensing, characteristics of remote sensors, and remote sensing applications in multiple academic disciplines and professional sectors. Covers remote sensing principles, aerial photography, digital image processing and interpretation, major remote sensing systems, image display and enhancement, information extraction, digital image data classification, and accuracy assessment. Not open to students who has earned credit for GE 3350. Falls and Springs.
Prerequisite(s): GE 2050.

GE 4050 Geospatial Technology Applications (4)
Advanced methods, theories, and applications of geographic information systems (GIS) to various geographic problems. Emphasizes the applications of GIS and advanced acquisition of technology and skills in managing and analyzing spatially referenced data and information. Covers advanced raster data analysis, GPS application, spatial statistics, remotely sensed image analysis, advanced GIS modeling, 3D analysis and printing, and web GIS. Springs and Falls.
Prerequisite(s): GE 2050

GE 4060 GIS Programming (4)
Geographic Information Systems (GIS) programming and the development of algorithms for spatial analysis. Focuses on concepts, principles, and techniques of programming to solve a variety of geographic problems. Covers the concepts, methods, and approach to object-oriented programming and GIS solutions to automate geoprocessing tasks to explore, handle, manipulate, and model spatial data. Fall of odd years.
Prerequisite(s): GE 2050.

GE 4100 Geographic Information Systems Internship (1-4)
Students engage in an individualized Geographic Information Systems (GIS) work program in government, business, non-profit, educational or other related organizations which emphasizes some aspects of GIS application to their field(s) of study. Repeatable for a maximum of 4 credits. Falls and Springs.
Prerequisite(s): GE 2050 and permission of the instructor.

GE 4120 Topics in Human Geography (3)
Introduces students to 1 of the fields of Human Geography. Examples might include Cultural Geography, Social Geography, Economic Geography, Medical Geography, the Geography of Religion, or the Geography of Sport. Fall of odd years.