

GIS 205L : GIS Database Design and Programming Laboratory

Credits: 1

Class Hours: 3 lab

Prerequisites: "C" or higher in GIS 189 and GIS 200.

Corequisite Courses:

GIS 205

Description: This course will cover the technical exercises of advanced compilation, design, and production of maps, including the use of Global Positioning Systems (GPS), Geographic Information Systems (GIS), research, presentations, and illustration using mapping software. Special emphasis and concentration will focus on sustainability, considering the current and future use and protection of resources in light of land management.

Semester Offered: Fall, Spring

Course Student Learning Outcomes (CSLOs):

1. Apply concepts, techniques, and software tools that are part of advanced Geographic Information Systems, with emphasis on GPS use and data transformation, geovisualization, geodatabase construction and design, data modeling, topology, advanced geospatial analysis, and case study applications.
2. Apply intermediate geospatial knowledge, technologies and techniques to create a map focused on an area of interest, such as sustainability, site suitability analysis, and resource management.
3. Describe and analyze advanced geodatabase design, including spatial analysis, topology, model building, and automated geo-spatial processing.
4. Analyze and identify advantages and disadvantages of various geospatial information technologies, both advanced and basic.
5. Apply strategies for complex problem solving that include geospatial databases, including using GIS, GPS, geodatabase modeling, and automated geoprocessing.
6. Analyze and describe geographic information representation, addressing complex problems with GIS technologies and creating solutions.