



Syllabus

CON 241 Introduction to Geographic Information Systems

General Information

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Department Conservation

Course Prefix CON

Course Number 241

Course Title Introduction to Geographic Information Systems

Dual Listing (also listed as): GIS 241

Course Information

Catalog Description An introductory level geospatial technology course designed to introduce students to the concepts and theories of geographic information systems (GIS) and the practice of geospatial analysis. This course consists of a lecture component and a laboratory component. Students will learn to apply GIS concepts through hands-on exercises designed to explore and analyze spatial data. Students will use leading geospatial software and Global Positioning System (GPS) units used by numerous professions including natural resources conservation and sustainability, business management, criminal justice, and community planning. (Also listed as GIS 241.)

Credit Hours 3

Lecture Contact Hours 2

Lab Contact Hours 2

Other Contact Hours 0

Grading Scheme Letter

Prerequisites

None

Co-requisites

None

First Year Experience/Capstone Designation

This course DOES NOT satisfy the outcomes applicable for status as a FYE or Capstone.

SUNY General Education

This course is designated as satisfying a requirement in the following SUNY Gen Ed category

None

FLCC Values

Institutional Learning Outcomes Addressed by the Course

Vitality, Inquiry, Perseverance, and Interconnectedness

Course Learning Outcomes

Course Learning Outcomes

1. Describe fundamental GIS concepts, techniques and real-world applications.
2. Demonstrate basic skills necessary to utilize a Desktop GIS Package and a GPS unit.
3. Demonstrate basic cartographic skills to clearly communicate quantitative spatial relationships.
4. Independently apply skills (i.e. data acquisition and creation, file management, data importation, alignment, geospatial analysis, and use of cartographic principles) to a student-selected project site.

Outline of Topics Covered

- I. Introduction to ESRI ArcGIS software package.
- II. Identify data source, file types, and file management.
- III. Create cartographically appropriate maps.
- IV. Explore and download online Geographic Information Systems (GIS) data.
- V. Collect data using a Global Positioning System (GPS) unit.
- VI. Post-process field collected GPS data.
- VII. Import GPS data into a GIS environment.

VIII. Gain a conceptual understanding of coordinate systems, and apply this understanding to manipulate map projections.

IX. Query and manage spatial and attribute data.

X. Create and edit spatial data.

XI. Work with geoprocessing tools (e.g. buffering, clipping, and merging).

Program Affiliation

This course is not required as a core course in any programs.