

GEOG 4405: Advanced Geographic Information Systems

3 Credit Hours

Prerequisite: GEOG 3305 and GEOG 3315

This course builds upon basic concepts addressed in the Introduction to Geographic Information Systems (GIS) course. The use of topological data procedures and relational database concepts within the GIS context will be investigated along with procedures relevant to building Geodatabases, including map projections, coordinate systems, digitizing vectors, and transformations. Fundamental spatial analysis operations are expanded upon, including spatial query, address matching, spatial aggregations, buffering, polygon overlay, and point-in polygon operations.

Notes: ArcGIS software is used in class.

GEOG 4410: Introduction to Remote Sensing

3 Credit Hours

Prerequisite: SURV 3320

Students investigate various mapping techniques used in GIS and geospatial technologies. These techniques can include data collection and management, mapping and visualization, 3D GIS, spatial analytics, and scripts and automation. Students demonstrate their comprehension of GIS techniques by way of exercises that render the production of digital maps. Notes: ArcGIS software is used in this course.

GEOG 4490: Special Topics in Geography

1-3 Credit Hours

Prerequisite: Approval of the instructor and department chair.

Selected topics of interest to faculty and students.

GEOG 4499: Senior Seminar in Geography

3 Credit Hours

Prerequisite: Students must be GEOG or GSS major with 60+ credit hours.

This is a required capstone course for all Geography BA majors and is an option for Geospatial Sciences majors. This seminar helps students apply their geographic knowledge and skills culminating in a research project. The course also includes preparation for graduate study and job opportunities in geography.