GEOSPATIAL INFORMATION SCIENCE, MINOR

Geospatial Information Science is a research field that utilizes specialized computer hardware, software, and procedures for the capture, presentation, and analysis of all types of natural and social science data referenced (mapped) to the earth's surface. The minor/certificate program provides knowledge, training, applications, and research skills for successful careers or graduate work across a number of disciplines. Students who complete the minor or certificate should be able to:

- perform Geospatial Information Science capture, analysis, and presentation using vector, raster, and remote sensing data;
- use Geospatial Information Science data to investigate research questions in the social or natural sciences;
- employ geographic concepts such as projections, coordinate systems, and scale;
- recognize and apply information science concepts such as data collection, representation, queries, and storage;
- enter a career that utilizes GIScience principles and practices; and
- continue Geospatial Information Science work at the graduate level.

Geospatial Information Science minor/certificate credits can count toward a bachelor's degree in several departments such as Geography, Biology, Physical Science, Health Informatics, Natural Resources and the Environment, or Management Information Systems. Please see an advisor in the appropriate department. Students may not earn a Geospatial Information Science minor and a Geospatial Information Science undergraduate certificate.

Course Requirements

- Minimum of 18 credit hours
- Students must take courses from at least two different departments.
- Students must have a *B* (3.0) average in their GIScience courses for the minor or certificate and no grade below a *C* (2.0) in their GIScience courses to earn the minor or certificate.

Code	Title	Credit Hours
Geographic Information Systems Course		
GEO 426	Principles of GIS	3-4
or NRE 423	GIS and Data Systems	
Remote Sensing Course		
Select one of the following:		3-4
BSC 410	Remote Sensing/GIS Appl	
BSC 411	Dgtl Image Proc/GIS Model	
GEO 431	Remote Sensing & Photogram	
NRRM 433	GIS/RS in Natural Resources	3
Total Credit Hours		**9-11**

GIScience Courses

Code	Title	Credit Hours
BSC/PS 410	Remote Sensing/GIS Appl	4
BSC/PS 411	Dgtl Image Proc/GIS Model	4
CE 241	Introduction to Geomatics	3
GEO 110	Basic GIS	1
GEO 111	Air Photos & Satellite Imagery	1
GEO 112	Smartphone GPS	1
GEO 426	Principles of GIS	4
GEO 429	GIS Location Analytics	3
GEO 430	Environmental Raster GIS	4
GEO 431	Remote Sensing & Photogram	4
GEO 490	Internship (must be GIScience approved by adviser to qualify)	3
GLY 212	Geologic Field Methods	3
NRE 423	GIS and Data Systems	3
NRE 470	ES Internship (must be GIScience approved by adviser to qualify)	3
NRE 491	ES Senior Capstone (Senior Project II) (must be GIScience approved by adviser to qualify)	3
MIS 340	Intro to Database Mgt Systems	3
NRE 322	Assess I: Terrestrial Systems	4
NRE 323	Assessment II: Aquatic Ecology	4
Special Topics courses as approved by the GIScience Curriculum Committee.		
Independent Study courses as approved by the student's adviser in consultation with the GIScience Curriculum Committee.		