

GEOGRAPHIC INFORMATION SCIENCE (GIS) MINOR

Code	Title	Credits
Required Minor Courses		
CS 1064	Introduction to Programming in Python	3
GEOG 2084	Principles of Geographic Information Systems	3
GEOG 4084	Modeling with Geographic Information Systems	3
GEOG 4354	Introduction to Remote Sensing	3
or FREC 4214	Forest Photogrammetry and Spatial Data Processing	
Subtotal		12
Geographic Information Science Options		
Select two of the following:		6
FREC 4114	Information Technologies for Natural Resource Management	
GEOG 3314	Cartography	
GEOG 4254	R Programming for Geospatial Applications	
GEOG 4314	Spatial Analysis in Geographic Information Systems	
GEOG 4324	Algorithms in Geographic Information Systems	
GEOG 4334	Geospatial Information Technology for Land Change Modeling	
GEOG 4374	Remote Sensing and Phenology	
GEOG 4394	Introduction to Web Mapping	
GEOG 4404	Geovisualization	
Subtotal		6
Total Credits		18

Graduation Requirements

A minimum overall GPA of 2.0 in these courses is required to complete the minor.

All minors must include 6 or more credits at 3000 level or above.

All courses must be taken for an A-F grade unless they are only offered P/F.

Steps for completing the minor in Geographic Information Science for Non-Majors:

- Declare minor using a 'Major/Option/Minor Form' found in the CNRE Advising Center, 138 Cheatham Hall.
- Include minor information when updating the application for degree in Hokie Spa.
- Students cannot graduate until they have either:
 - a. satisfied the requirements for the minor or
 - b. withdrawn from the minor by notifying CNRE Academic Programs office in 138 Cheatham and revised their DARS.