

**College of Natural Resources and Environment (CNRE)  
Department of Geography  
Minor in Geographic Information Science  
(For Meteorology and Geography majors only) -- GIS-G  
(for students graduating in 2020)**

Name: \_\_\_\_\_

Student Major: \_\_\_\_\_

**A minimum of 18 credit hours to include:**

**1. Required Courses – 9 credits**

CS 1064:	Introduction to Programming in Python	(3) _____
GEOG 4084(GEOS 4084):	Modeling with Geographic Information Systems (Pre: 2084 and senior standing)	(3) _____
GEOG 4354(GEOS 4354):	Introduction to Remote Sensing or	
FREC 4214:	Forest Photogrammetry and Spatial Data Processing	(3) _____

**2. Geographic Information Science Options – Select at least 9 credits**

FREC 4114:	Information Technologies for Natural Resource Mgmt (Pre: FREC 2214 or GEOG 2314)	(3) _____
GEOG 4314:	Spatial Analysis in Geographic Information Systems (Pre: 4084)	(3) _____
GEOG 4324:	Algorithms in Geographic Information Systems (Pre: 4084, CS 1044)	(3) _____
GEOG 4334:	Geospatial Information Technology for Land Change Modeling (Pre: 4084)	(3) _____
GEOG 4374:	Remote Sensing and Phenology (Pre: 4354)	(3) _____
GEOG 4394:	Introduction to Web Mapping (Pre: 2314 or 3314 or 4084)	(3) _____

**3. GPA  $\geq$ 2.0 overall in the above courses**

**Steps for completing the minor in Geographic Information Science-G minor**

- Declare minor in Geography advising office in 108 Major Williams Hall and then submit your forms to the CNRE undergraduate programs office in 138 Cheatham Hall.
- Include minor information when updating the application for degree in Hokie Spa.
- See an adviser in Geography in 108 Major Williams Hall for advice on courses during pre-registration. Some courses in the minor requirements listed above have prerequisites, so be sure to consult the University Catalog or check with your advisor.
- Students cannot graduate until they have either (1) satisfied the requirements for the minor or (2) withdrawn from the minor by notifying CNRE Academic Programs office in 138 Cheatham and revised their DARS.