

# GEOGRAPHIC INFORMATION SCIENCE, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

## Program Requirements

Requirement	Credits
Requirements for the Minor	18

### Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10>).

In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
<b>Prescribed Courses</b>		
<i>Prescribed Courses: Require a grade of C or better</i>		
GEOG 160	Mapping Our Changing World	3
<b>Additional Courses</b>		
<i>Additional Courses: Require a grade of C or better</i>		
Select 6 credits of the following:		6
GEOG 361	Cartography–Maps and Map Construction	
GEOG 362	Image Analysis	
GEOG 363	Geographic Information Systems	
Select 9 credits (at least 6 credits at the 400-level) of the following:		9
GEOG 323		
GEOG 417	Satellite Climatology	
GEOG 461W	Dynamic Cartographic Representation	
GEOG 463	Geospatial Information Management	
GEOG 467	Applied Cartographic Design	
GEOG 468	Geographic Information Systems Design and Evaluation	
GEOG 485	GIS Programming and Software Development	