

# GEOGRAPHIC INFORMATION SCIENCE, CERTIFICATE

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Requirements for an undergraduate certificate may be completed at any campus location offering the specified courses for the certificate.

## Program Requirements

To earn an undergraduate certificate in Geographic Information Science, a minimum of 12 credits is required.

Code	Title	Credits
<b>Required Courses</b>		
GEOG 260	Geographic Information in a Changing World: Introduction to GIScience	3
Select 9 credits from:		9
GEOG 361	Cartography—Maps and Map Construction	
GEOG 362	Image Analysis	
GEOG 363	Geographic Information Systems	
GEOG 365	Introduction to GIS Programming	

### Non-Course Requirements

Per University policy, all credit courses for a certificate require a grade of 'C' or higher, and at least two-thirds (2/3) of the credits used to complete a certificate must be earned at Penn State. If student is completing multiple certificates in Geography, no more than one (1) course may double-count for each.