

Geographic Information Systems (GIS) and Cartography Certificate

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The Certificate in Geographic Information Systems (GIS) and Cartography is designed to give the student a substantial background in the fields of geographic information systems and digital cartography. Students completing the program will be familiar with the terminology, techniques and theory of GIS and cartography. Hands-on computer experience is a major feature of many of the courses. The program complements majors in disciplines other than geography while increasing the geography major's preparation for the job market.

May be taken at **graduate** and **undergraduate** levels. The student must earn a grade point average of at least 3.00 in the courses taken for the certificate. It is the responsibility of the student to notify the Head of the Department of Geography during or immediately after the semester in which the course requirements will be or have been completed. Up to 3 credits can be transferred from another institution. For graduate credit GEOG 2410 can be substituted with GEOG 6286 Studies in GIS.

Required

Geography:		
GEOG 2410	Geographic Information Systems I	3

or

GEOG 6286 Studies in: GIS		
GEOG 4320/5320	Geographic Information Systems II	3
GEOG 4360/5360	Cartographic Design	3

Electives **6**

Select two of the following:

Geography:		
GEOG 3778/5778	Spatial Data Analysis	
GEOG 4310/5310	GIS Applications: (Variable Topic)	
GEOG 4335/5335	Web Mapping and Data Visualization	
GEOG 4350/5350	Global Positioning System Field Survey Methods	
GEOG 4370/5370	Remote Sensing of the Environment	
GEOG 4380/5380	From Drones to Satellites: Next-Generation Mapping Using Imagery	
GEOG 4385/5385	Advanced Unmanned Aerial Systems Mapping	
GEOG 4390/5390	GIS Programming	

Total Hours **15**

Related Programs

- Geography M.A.