

# Certificate in Geographic Information Science (GISc)

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The Geography department offers a graduate certificate in Geographic Information Science (GISc). GISc is the foundation of Geographic Information Systems (GIS), which integrate spatial data sets in the form of digital maps, digital aerial photos, satellite imagery, and global positioning system (GPS) coordinates. The goal of GISc is to model landscapes digitally and to enable the characterization of spatial and temporal processes.

Certificate students must be admitted to UND as either full or part-time graduate students. Application for admission must be made to the UND School of Graduate Studies. The certificate is designed to serve:

1. non-geography graduate students currently pursuing a graduate degree from UND, and
2. non-degree-seeking professionals already holding a graduate and/or baccalaureate degree who seek to "re-tool."

The courses taken in a previously completed GISc certificate program may be applied to a Master's degree in Geography.

## Admission Requirements

1. A baccalaureate degree from an accredited university.
2. A GPA of at least 2.75 in all undergraduate work.

## Certificate Requirements

Successful completion of the 9-credit GISc Certificate requires the following:

1. Completion of the six credits of core courses (see below).
2. Completion of at least three credit hours of elective courses (see below).
3. A minimum grade point average of 3.00.
4. Completion time of no more than five years.

5. Code	Title	Credits
<b>Required Core Courses</b>		
GEOG 474 & 474L	Introduction to Geographic Information Systems (GIS) and GIS Laboratory	3
GEOG 574	Advanced Techniques in Geographic Information Systems	3
<b>Elective Courses</b>		
Select one of the following:		3
GEOG 471 & GEOG 474L	Cartography and Visualization and GIS Laboratory	
GEOG 475	Digital Image Processing	
GEOG 476	Selected Topics in Geographic Information Systems	
GEOG 575	Seminar in Remote Sensing	
GEOG 591	Directed Study in Geographical Problems	
<b>Total Credits</b>		<b>9</b>