

# Geography Certificate: Geographic Information Science Concentration

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Applications of Geographic Information Systems and Science (GIS) range from business planning and public health to ecosystem management. GIS is a tool for studying spatial problems. It links a database with map features in such a way that users can input, store, retrieve, and analyze geographic data. Students choosing this program acquire the skills and knowledge necessary to apply GIS in their chosen field of study. Students should discuss the elective courses with the program advisor to better align them with their interest.

## Certificate requirements

(All colleges; open only to degree-seeking UWL students. Not open to geography majors with a GIS concentration or GIS minors.)

12 credits

Code	Title	Credits
<b>Core</b>		
GEO 305	Geographic Information Systems and Science I	3
GEO 405	Geographic Information System and Science II	3
<b>Electives</b>		
Select six credits of the following:		6
GEO 410	Geospatial Field Methods	
GEO 412	Geospatial Applications of Unmanned Aerial Systems	
GEO 415	Remote Sensing of the Environment I	
GEO 418	Map Design and Geovisualization	
GEO 445	Remote Sensing of the Environment II	
GEO 455	Web Mapping	
GEO 465	Geospatial Automation	
GEO 485	Geographic Information System and Science III	
GEO 488	Quantitative Methods in Geography	
<b>Total Credits</b>		<b>12</b>

**Upon completion of the program, students must have a minimum cumulative GPA of 2.5 and submit a professional portfolio to the program advisor.**

**Geography, environmental science, earth science, and geoarchaeology majors/minors** may only duplicate six GEO credits between the major/minor and this certificate.