

Graduate Certificate in Geospatial Information Science and Technology

This Graduate Certificate program will provide training for students to gain knowledge and skills necessary to employ Geospatial Information Science and Technology (GIST) in their field of expertise. GIST is a collective term used to describe geographic information systems, remote sensing, global positioning, internet mapping, and other approaches for collecting, managing, analyzing, and visualizing data with spatial attributes. The program combines training in core GIST concepts and exposure to how GIST is being applied in different disciplines. Students will become experienced using the leading industry system ESRI's ArcGIS, as well as other proprietary and open source systems such as ENVI and QGIS. This program is appropriate for students from many disciplines and is especially relevant to students from geology, environmental science, social science, intelligence and national security studies, and civil or mechanical engineering.

Admission Requirements

Admission to the program requires an application to the program through the graduate school. This can occur at the same time students apply to another graduate program. Students who have already been admitted to another graduate program must separately apply to this program. There are no prerequisite courses, although knowledge of some programming, statistics, and/or mathematics is helpful.

Degree Plan

Credit hours: 15

Code	Title	Hours
Required courses		
GEOL 5321	Introduction to GIST	3
GEOL 5322	Advanced GIST	3
Technical Electives		3
Select one course from the list below:		
EE 5360	Computer Vision	
EE 5372	Image Processing	
EE 5373	Intro to Remote Sensing Syst	
GEOL 5323	Spat Analysis Earth/Env Sci	
GEOL 5324	Geocomputation	
GEOL 5362	Directed Study in Geology	
GEOP 5335	Intro to Remote Sensing	
GEOP 5336	Digital Image Processing	
SOCI 5381	Cartography & Visualization	
Applied Courses		3
Select one course from the list below:		
BIOL 5301	Select Adv Topics Biol Science	
GEOL 5303	Computer Appl in Earth Sci	
GEOL 5323	Spat Analysis Earth/Env Sci	
GEOL 5362	Directed Study in Geology	
INSS 5355	Geospatial Intelligence	
Elective		3
Select one additional course from Technical Electives or Applied Courses		
Total Hours		15