

Geographic Information Systems (Certificate)

Building on NC State's strengths in technology, computational methods, and geographic information systems (GIS), this program provides professional, graduate-level academic preparation in the advanced application of GIS technologies to a wide spectrum of disciplines, including economics, public health, emergency planning and response, land use planning, environmental resources, etc. The certificate, which is also available to current NC State students enrolled in non-GIS graduate programs, forms the basis for the Master of Geospatial Information Science and Technology (<https://online-distance.ncsu.edu/program/master-of-geospatial-information-science-and-technology/>).

Admissions Requirements

Admission to the certificate program requires a baccalaureate degree from an accredited college or university with at least a 3.0 GPA. Students with less than a 3.0 undergraduate GPA may still be considered for admission based on the remaining criteria or may be recommended to take one of our graduate courses as a non-degree student first. These determinations will be made on a case-by-case basis. All applicants must submit:

- Transcript showing Bachelor's degree conferred
- A clear and concise personal statement/statement of interest
- A resume/CV

Current NC State students in other degree programs may also be eligible to earn the certificate. These students should contact the Center for Geospatial Analytics for more information on how to apply.

Other relevant information

Up to 12 credit hours of B or better grades from the Certificate can transfer into the MGIST (<https://online-distance.ncsu.edu/program/master-of-geospatial-information-science-and-technology/>) program if/when a student applies and is accepted into that program.

Plan Requirements

Code	Title	Hours	Counts towards
Core Courses		6	
GIS 510	Fundamentals of Geospatial Information Science and Technology		
GIS 520	Spatial Problem Solving		
Elective Courses		6	
Choose 6 credit hours of electives from the "Elective Courses" listed below, at least 3 of which must be GIS prefix courses			
Total Hours		12	

Elective Courses

Code	Title	Hours	Counts towards
GIS 501	Geospatial Professionalism		
GIS 512	Introduction to Environmental Remote Sensing		
GIS 515	Cartographic Design		
GIS 517	GIS Applications in Landscape Architecture and Environmental Planning		
GIS 521	Surface Water Hydrology with GIS		
GIS 530	Spatial Data Foundations		
GIS 532	Geospatial Data Science and Analysis		
GIS 535	Web and Mobile GIS Protocols		
GIS 595	Special Topics in Geospatial Information Science		
GIS/MEA 582	Geospatial Modeling		
GIS 584	Mapping and Analysis Using UAS		
GIS 609	Geospatial Forum		
GIS 610	Special Topics in Geospatial Information Science		
SSC 540	Geographic Information Systems (GIS) in Soil Science and Agriculture		
SSC 545	Remote Sensing Applications in Soil Science and Agriculture		
BAE 535	Precision Agriculture Technology		
BAE 536	GIS Applications in Precision Agriculture		

LAR 517	GIS Applications in Landscape Architecture and Environmental Planning
MEA 511	Introduction to Meteorological Remote Sensing
HI 535	Spatial History
ST 501	Fundamentals of Statistical Inference I
ST 502	Fundamentals of Statistical Inference II
ST 511	Statistical Methods For Researchers I
ST 513	Statistics for Management and Social Sciences I
ST 514	Statistics For Management and Social Sciences II
ST 533	Applied Spatial Statistics
ST 555	Statistical Programming I
ST 556	Statistical Programming II

Total Hours **0**

* Other courses not listed can be approved as an elective upon consultation with an advisor.

Faculty

Full Professors

Ross Meentemeyer

Helena Mitasova

Stacy Nelson

Gary Roberson

Associate Professors

Jeffrey White

Practice/Research/Teaching Professors

Perver Baran

Eric Money

Stacy Supak

Laura Tateosian

Vaishnavi Thakar

Emeritus Faculty

Heather Cheshire

Hugh Devine

Siamak Khorram