

GEOGRAPHIC INFORMATION SCIENCE GRADUATE CERTIFICATE

Banner Code: SC-CERG-GISC

Graduate Advising

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Fairfax Campus

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Website: science.gmu.edu/academics/departments-units/geography-geoinformation-science/geographic-information-science

This graduate certificate prepares students for employment in federal, state, and local government positions that require GIS skills. The certificate has been found suitable for the needs of business and industry, including those corporations that serve as contractors to governments in the United States and overseas.

The Geographic Information Science Graduate Certificate may be pursued on a full-or part-time basis.

Admissions & Policies

Admissions

University-wide admissions policies can be found in the Graduate Admissions Policies (<http://catalog.gmu.edu/admissions/graduate-policies/>) section of this catalog. International students and students having earned international degrees should also refer to Admission of International Students (<https://catalog.gmu.edu/admissions/international-students/>) for additional requirements.

Eligibility

All applicants should have a working knowledge of, or prior education or training in, computer technology. Knowledge of GIS, remote sensing technology, and cartography are preferred. Students from any discipline are welcome to apply.

Application Requirements

To apply for this certificate, prospective students should submit the George Mason University Admissions Application (<https://www2.gmu.edu/admissions-aid/apply-now/>) and its required supplemental documentation.

GRE scores and letters of recommendation are not required but will strengthen an application, if available.

Policies

For policies governing all graduate certificates, see AP6 Graduate Policies (<http://catalog.gmu.edu/policies/academic/graduate-policies/>).

Transferring Previous Graduate Credit into this Certificate

Previously earned and relevant graduate credits may be eligible for transfer into this certificate; details can be found in the Credit by Exam

or Transfer (<https://catalog.gmu.edu/policies/academic/graduate-policies/>) section of this catalog.

Premium Tuition Rate

This professional certificate program charges students at a differential (premium) tuition rate. This rate applies to all students who enroll in this certificate program, regardless of in-state or out-of-state status. The differential tuition will be used to fund continuing improvements in the departmental computational facilities used to support the certificate program.

Requirements

Certificate Requirements

Total credits: 15

This certificate may be pursued on a full-or part-time basis.

Students should refer to the Admissions & Policies tab for specific policies related to this certificate.

Core Courses

Code	Title	Credits
GGG 550	Geospatial Science Fundamentals	3
GGG 553	Geographic Information Systems	3
Select 3 credits from the following:		3
GGG 563	Advanced Geographic Information Systems	
GGG 650	Introduction to GIS Algorithms and Programming	
GGG 653	GIS Analysis and Application	
GGG 692	Web-based Geographic Information Systems	
Total Credits		9

Electives

Code	Title	Credits
Select an additional 6 credits from the following:		6
GGG 505	Transportation Geography	
GGG 531	Land-Use Modeling Techniques and Applications	
GGG 551	Cartographic Design	
GGG 560	Quantitative Methods	
GGG 563	Advanced Geographic Information Systems	
GGG 579	Remote Sensing	
GGG 631	Spatial Agent-Based Models of Human-Environment Interactions	
GGG 632	Spatial Modeling for Public Health	
GGG 650	Introduction to GIS Algorithms and Programming	
GGG 653	GIS Analysis and Application	

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GGS 655	Geovisualization
GGS 658	Terrain Mapping
GGS 664	Spatial Data Structures
GGS 675	Location Science
GGS 692	Web-based Geographic Information Systems
GGS 773	Interoperability of Geographic Information Systems
GGS 787	Scientific Data Mining for Geoinformatics
GGS 788	Deep Learning for Geoinformation
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Total Credits	6