

GRADUATE CERTIFICATE IN GEOGRAPHIC INFORMATION SYSTEMS (STEM)

Geographic information systems (GIS) allow us to capture, manage, query, analyze, and model geospatially referenced data. GIS ties the idea of location to information, making it possible to visualize it all in map form. Using geospatial techniques we combine and overlay data to show complex scenarios from a geographic perspective. GIS also allows us to integrate data from diverse sources, helping identify relationships, trends, and patterns of distribution.

GW's certificate program provides students with a solid grounding in geospatial theory and techniques, combined with the practical skills to apply these techniques to real-world problems. Students are exposed to a combination of industry standard software and open source programs in classes that encourage an extensive hands-on approach. The program features service learning components in courses that increasingly incorporate the growing field of open source GIS.

In today's job market, demand for geospatial science skills is growing at a fast rate, and GIS is increasingly popular in many different disciplines and industries, such as scientific investigation, resource management, marketing, archaeology, environmental research, urban planning, demography, development, policy, public health, emergency management, and logistics.

Certificate students have an opportunity to pick from a broad range of electives that match their interests. Faculty members have expertise in GIS, remote sensing, and spatial analysis. The department's state-of-the-art spatial analysis lab is available for student research.

The certificate requires the completion of 12 credits. All students are expected to complete the program in two years (four semesters).

This is a STEM designated program.

Visit the program website (<https://geography.columbian.gwu.edu/graduate-certificate-geographical-information-systems/>) for additional information.

ADMISSIONS

Supporting documents not submitted online should be mailed to:

Columbian College of Arts and Sciences, Office of Graduate Studies
The George Washington University
801 22nd Street NW, Phillips Hall 107
Washington DC 20052

For additional information about the admissions process visit the Columbian College of Arts and Sciences Frequently Asked Questions (<https://columbian.gwu.edu/graduate-admissions-faq/>) page.

Contact:

askccas@gwu.edu
202-994-6210 (phone)

Hours: 9:00 am to 5:00 pm, Monday through Friday

REQUIREMENTS

The following requirements must be fulfilled: 12 credits, including 6 credits in required courses and 6 credits in elective courses.

Code	Title	Credits
Required		
GEOG 6304	Geographic Information Systems I	
GEOG 6305	Geospatial Statistics	
Electives		
Two courses selected from the following:		
GEOG 6303	Introduction to Remote Sensing	
GEOG 6306	Geographic Information Systems II	
GEOG 6307	Digital Image Processing	
GEOG 6308	Programming for Geospatial Applications I	
GEOG 6309	GIS for Emergency Management	
GEOG 6310	Geovisualization and Cartography	
GEOG 6311	Open Source Solutions for Geospatial Project Management	