

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

Admission deadlines: Fall – July 1

Spring – November 1

Applications received outside of these deadlines will be considered on an individual basis.

Standardized test scores: To be considered for admission, you must meet the following minimum English proficiency scores:

- Academic IELTS: an overall band score of 6.0 with no individual score below 5.0

- TOEFL: 80 on Internet-based test

- Duolingo: 110

- PTE Academic: 53

Recommendations: (1) recommendation required.
required:

Prior academic records: Transcripts are required from all colleges and universities attended, whether or not credit was earned, the program was completed, or the credit appears as transfer credit on another transcript. Unofficial transcripts from all colleges and universities attended must be uploaded to your online application. Official transcripts are required only of applicants who are offered admission.

If transcripts are in a language other than English, English language translations must be provided. The English translation alone should be uploaded into your application.

Prerequisite requirements: A bachelor of arts (BA) degree or bachelor of science (BS) degree with a GPA of at least 3.0. Applicants with a GPA below 3.0 may be considered if they submit a letter of recommendation from a professor in a related field.

Statement of purpose: In an essay of 250-500 words, state your purpose in undertaking graduate study in your chosen field. Include your academic objectives, research interests, and career plans. Also discuss your related qualifications, including collegiate, professional, and community activities, and any other substantial accomplishments not already mentioned on the application.

International applicants only: Please follow this link - <https://columbian.gwu.edu/international-graduate-applicants> (<https://columbian.gwu.edu/international-graduate-applicants/>) - to review the International Applicant Information carefully for details on required documents and English language requirements. Please note: international students who require a student visa from GW are not eligible to apply for admission to the program.

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