

GEOGRAPHIC INFORMATION SCIENCE CERTIFICATE

Department of Geography (<https://cas.umw.edu/geography/>)

The Geography Department hosts an interdisciplinary certificate program in Geographic Information Science. Open to students in all majors and to non-degree seeking students, the program is designed to address the growing demand for GIS-trained personnel in business, government, education, health care, and numerous other settings. The field encompasses integrated hardware, software, and database systems that are capable of capturing, storing, analyzing, and displaying geographical information. Upon completion of the certificate, students may be eligible to apply for an additional professional certification in GIS administered by the GIS Certification Institute (GISCI).

Certificate Requirements

Code	Title	Credits
Introductory Course		
Select one of the following:		4
GISC 200	Introduction to GIS	
GISC 250	Introduction to Geographic Information Systems and Cartography	
EESC 205	GIS Applications in Environmental Science and Geology with Lab	
Intermediate Course		
GISC 351	Spatial Analysis	4
	or GEOG 351A Spatial Analysis	
Programming or Web-GIS Course		
GISC 450	GIS Programming	4
	or GISC 482 Web GIS: Concepts and Applications	
Elective		
Select one of the following:		4
GISC 340	Remote Sensing and Air Photo Interpretation	
GISC 355	Mobile Geographic Information Systems and Global Positioning Systems	
Additional 400-level GISC course		
Capstone Experience		
Select one of the following: ¹		3
GISC 491	Directed Study in GIS	
GISC 499	GIS Internship	
Total Credits		19

¹ All directed studies and internships must be approved by the Department Chair.

All GISC course descriptions can be found in the Geographic Information Science section (<https://catalog.umw.edu/undergraduate/course-descriptions/gisc/>).

Students with professional experience in GIS may have a maximum of one course or 4 credits waived with appropriate approval, but must take additional course credits to total 19 credit hours.

Academic/Continuance Policies for the Certificate in GIS

A maximum of two approved courses (3-8 credits) may be transferred from another regionally-accredited institution to meet certificate program requirements. All classes for the certificate must be completed within a four-year period following matriculation into the certificate program.

Students must maintain an overall 2.5 grade-point average in certificate program courses, or have permission from the faculty advisor, prior to registering for the final directed study or internship course. Students may be required to meet with an advisor for an annual review of progress and a summary review at the completion of course work.

Geography Department

Melina A. Patterson, Chair
Joseph W. Nicholas, Career Advisor

Faculty

Professors

Dawn S. Bowen
Stephen P. Hanna
Farhang Rouhani

Associate Professors

Caitlin C. Finlayson
Jacqueline Gallagher
Marco Millones Mayer
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Melina A. Patterson
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