GEOSPATIAL INFORMATION SCIENCE, GRADUATE CERTIFICATE

Admission Requirements

Students may pursue the graduate certificate while enrolled in the any master's program **or** as a certificate-only student.

- Students already enrolled in the master's degree program should submit to the academic dean a Secondary Program Request form at https://www.marshall.edu/graduate/current-students/forms-and-information/.
- Applicants interested in the certificate-only program should apply for admission to Marshall University as a Certificate/Professional Development student and select on the application form the Certificate in Geospatial Information Science.

Program Requirements

A graduate certificate in Geospatial Information Science consists of a minimum of 16 graduate hours in courses designated as GIScience Courses, including regularly offered courses as well as special topics courses. Students must have a *B* (3.0) average in their GIScience courses and no grade below a *C* (2.0) in their GIScience courses to earn the certificate. The program is designed to:

- offer GIScience study in a variety of disciplines with a variety of applications;
- teach students GIScience techniques;
- teach students to apply GIScience to solve scientific research problems;
- encourage students to gain experience in the GIScience field by means of internships;
- integrate GIScience applications with computer science concepts;
- prepare students for GIScience employment. or additional work at the doctoral level.

Students may earn this certificate entirely online or in the traditional classroom.

Course Requirements

Code	Title	Credit Hours
GIScience Required Course		
GEO 526	Principles of GIS [1]	4
Select one Remote Sensing course		4
GEO 531	Remote Sensing & Photogram	
BSC/PS 510	Remote Sensing/GIS Appl	
BSC/PS 511	Dgtl Image Proc/GIS Model	
Special Topics/Independent Study as approved by the GIScience certificate director.		
GIScience Electives		**8**
Select at least two of the following:		
BSC/PS 510	Remote Sensing/GIS Appl	
BSC/PS 511	Dgtl Image Proc/GIS Model	
BSC 648	Landscape Ecology	
ES 626	Remote Sensing & Map Use	
GEO 523	Cartography & GIS	
GEO 527	Principles of GIS II	
GEO 529	Location Analysis and GIS	
GEO 530	Environmental Raster Analysis	
GEO 531	Remote Sensing & Photogram	
GEO 532	Enterprise GIS	
GEO 533	GPS & Mobile Geospatial T	
GEO 534	Flood Hazards and GIS	
GEO 540	Spatial Statistics and GIS	
GEO 554	Drones:Remote Sensing & GIS	
GEO 631	Applied GIS Projects	
GEO 690	Internship in Geography (must be GIScience approved by advisor in advance)	
IS 645	Geographic Information Systems	
PS 670	Advanced Practicum (must be GIScience approved by advisor in advance)	
Special Topics courses as approved by program director in advance		
Independent Studies courses as approved by student's advisor in advance		
Total Credit Hours		**16**

[1] Requirement waived if GEO 426 Principles of GIS or its equivalent taken as an undergraduate

Oversight of the GIScience Certificate Program

The interdisciplinary GIScience Curriculum Committee oversees the program and approves changes to the program. Additional GIScience faculty members and administrative stakeholders may be added to the Committee by consensus of the members or at the request of their Dean. As members leave university service, they may be replaced at the discretion of their department. Current members and their colleges are:

- Anne Axel, COS
- David Cartwright, COS
- Hilton Cordoba, COLA
- Yi Duan, LCOB
- Tom Jones, COS
- Min Kook Kim, COS
- Jamie Leonard, COLA, Director of Undergraduate and Graduate Certificate Programs and Undergraduate Minor
- Ron Martino, COS
- Brian Morgan, COS
- Andrew Nichols, CECS
- Scott Simonton, CECS
- Jayme Waldron, COS
- Anita Walz, COLA
- Jamie Wolfe, CEGAS

Administrative Home

James Leonard, Ph.D., Geography Department, College of Liberal Arts, is the director of the program and can provide students with information, course substitutions, advising, forms, and other assistance.