Request for Change of a Graduate Certificate

Geospatial Information Science Certificate – Basic

**Admission Requirements**

Students may pursue the graduate certificate while enrolled in any master’s program OR as a certificate-only student.

* Students already enrolled in a master’s degree program should submit to the Graduate College a Secondary Program Request form available at [www.marshall.edu/graduate/](http://www.marshall.edu/graduate/).
* 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 - Basic.

GIScience credits can count toward a master’s degree in several departments such as Geography, Physical Science, Environmental Sciences, Technology Management, and Information Technology. Please see an advisor in the appropriate department.

**Program**

A graduate certificate in Geospatial Information Science - Basic consists of a **minimum of 12 graduate credit 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 GIS study in a variety of disciplines with a variety of applications;
* teach students GIS techniques;
* teach students to apply GIS to solve scientific research problems;
* encourage students to gain experience in the GIS field by means of internships;
* integrate GIS applications with computer science concepts;
* prepare students for GIS employment or additional work at the doctoral level.

GIScience required course:

* GEO 526 Principles of GIS (4 hrs.) – requirement waived if GEO426 or its equivalent taken as an undergraduate

GIScience electives:

* BSC 510/PS 510 Remote Sensing/GIS Applications (4 credit hours)
* BSC 511/PS 511 Digital Image Processing/GIS Model (4 hrs.)
* GEO 529 Principles of GIS 2 – Vector Analysis (4 hrs.)
* GEO 530 GIS – Raster Analysis (4 hrs.)
* GEO 531 Principles of Remote Sensing and Photogrammetry (3 hrs.)
* GEO 532 Enterprise GIS (3 hrs.)
* GEO 533 GPS and Mobile Geospatial Technologies (3 hrs.)
* GEO 540 Spatial Statistics and GIS (4 hrs.)
* GEO 631 Applied GIS Projects (3 hrs.)
* GEO 690 Internship (1-6 hrs.; must be GIScience approved by the student’s advisor in advance)
* IS 645 Geographic Information Systems (3 hrs.)
* NRRM533 GIS and Remote Sensing in Natural Resource Management (3 hrs.)
* NRRM602 GIS/RS Research Method in NRRM (3 hrs.)
* PS 570 Practicum (4 hrs.; must be GIScience approved by the student’s advisor in advance)
* PS 670 Advanced Practicum (4 hrs.; must be GIScience approved by the student’s advisor in advance)
* Special Topics courses as approved by the GIScience Curriculum Committee
* Independent Studies courses as approved by the student’s advisor in advance

**Oversight of the GIScience Certificate Program**

The interdisciplinary GIScience Curriculum Committee oversees the program, approves Special Topics and Independent Study courses, 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 departments/colleges are:

* Anne Axel, Biological Sciences/COS
* Richard Begley, Enginering/CITE
* David Cartwright, ISAT/COS
* Jan Fox, Senior VP for Information Technology/CIO
* Jeffrey Huffman, Engineering/CITE
* Tom Jones, Integrated Science and Technology/COS
* Min Kook Kim, Integrated Science and Technology/COS
* Jamie Leonard, Geography/COLA, Director of Undergraduate and Graduate Certificate Programs and Undergraduate Minor
* Brian Morgan, Integrated Science and Technology/COS
* Andrew Nichols, Engineering/CITE
* Bill Niemann, Geology/COS
* Mitchell Scharman, Geology/COS
* Jonathan Thompson, Computer Science/CITE
* Jayme Waldron, Biological Sciences/COS
* Anita Walz, Geography/COLA
* Jamie Wolfe, CITE/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, advising, forms, and other assistance.