

# Master of Science in GIScience and Geoenvironment



The Western Illinois University Department of Earth, Atmospheric, and Geographic Information Sciences offers a Master of Science in GIScience and Geoenvironment, a GIS certificate and a certificate in Community Development and Planning. The primary areas of faculty mentored graduate research include:

- Planning
- Transportation
- Spatial analysis
- Environmental GIS applications
- Social GIS applications
- Remote sensing
- GIS visualization
- Cartography
- River science and geomorphology

## Admission Requirements

Applicants must meet regular admission requirements of the Western Illinois University School of Graduate Studies and have at least a cumulative GPA of 2.75 for all undergraduate coursework, or a GPA of 3.0 or higher for the last two years of undergraduate coursework, to be considered for a graduate assistantship. Students must have a working knowledge of the fundamentals of geospatial systems and geoenvironment. If deficiencies are identified, the graduate program coordinator will work with the student to address any additional coursework prior to starting the master's program or during the first semester in the program. The master's in GIScience and Geoenvironment is one of the integrated baccalaureate and master's degree programs on campus.

## Degree Requirements

A minimum of 32 sh of graduate credit is required for the master's degree, 9 sh of which may be electives from outside the department. Completion of the GIScience and Geoenvironment master's program is contingent upon the fulfillment of specific course requirements and the completion of one of three degree options: (1) thesis, (2) applied project, or (3) professional plan. The thesis option (3 sh) seeks to answer a question relevant to an area of geographic inquiry. The applied project option (3 sh) is intended for students whose career aspirations are best served by gaining practical experience in the design and solution of a geographical, environmental, or planning problem and presentation of the results. Both options require a research proposal to be presented and the completed thesis/applied project to be defended to faculty and students. The

professional plan requires students to complete an internship and extended courses.

## Career Opportunities

For more than 50 years, department graduates have pursued career paths in education, business and government. The growing demand for professionals with Geographic Information Science (GIScience) training has resulted in strong career opportunities for geographers with the ability to use geospatial technology to process, analyze and represent data in maps and images. Today, public and private organizations are turning to geography and GIScience to predict flood paths, analyze crop planting sites, identify locations for retail expansion and much more. The types of organizations hiring graduates of geography programs include disaster response companies, agribusinesses, transportation firms, land use planning agencies, natural resource management organizations, historic preservation firms, construction companies, real estate firms and sustainable energy companies, as well as local, regional and federal governments.

## Faculty Expertise

Faculty members hold doctoral degrees from distinguished universities across the United States and are actively engaged in research published and presented in venues of national and international significance. Since 2010, department members have been awarded \$522,000 in highly competitive National Science Foundation grants, which have given students opportunities to conduct guided, hands-on scientific research. Faculty members have also been published in a wide range of peer-reviewed journals, individually and jointly with

**Program Location:**  
Macomb

## Contact Information

**Questions about the program:**  
Department of Earth, Atmospheric,  
and Geographic Information Sciences  
Graduate Coordinator  
(309) 298-1648  
eagis@wiu.edu  
wiu.edu/cas/eagis

**General admission questions:**  
School of Graduate Studies  
(309) 298-1806 or (877) WIU GRAD  
Grad-Office@wiu.edu  
wiu.edu/grad



**Western Illinois  
University**

students. Given the global nature of geography, the department prides itself in its diversity and broad range of competencies.

## Graduate Assistantships

The department offers multiple graduate assistantships to accepted students, providing tuition waivers and monthly stipends in return for work under the supervision of faculty mentors. Applicants with GIS experience may have the opportunity to work in the GIS Center, where they can build strong portfolios working on real-world GIS projects. Graduate assistants are not required to teach, and all degree-seeking domestic and international students can apply. Multiple scholarships are also available to graduate students.

Graduate students with full-time assistantships are required to work 20 hours per week and be enrolled for at least 9 SH per semester.

*Western Illinois University is an Affirmative Action and Equal Opportunity employer with a strong commitment to diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including, but not limited to, minorities, women and individuals with disabilities. WIU has a non-discrimination policy that includes sex, race, color, sexual orientation, gender identity and gender expression, religion, age, marital status, national origin, disability and veteran status.*

## Facilities

The department maintains the Meteorology Laboratory and two Geographic Information and Spatial Science laboratories. The department also houses a GIS Center, which serves as the GIS management center (spatial data creation and repository) for McDonough County, the city of Macomb and Western Illinois University. The Leslie F. Malpass Library contains a repository of geographical data in paper and digital formats and is thus a vital resource to the department.

## Distinctive Features

The department has a low student-to-faculty ratio, which allows students to receive one-on-one attention and access to faculty members. The employment outlook for graduates with training in GIS, remote sensing and other geospatial technologies is very positive. GIScience is a strength of the department and graduate students have a consistent track record of transferring the technical and analytical skills learned in the program into successful career opportunities.

## Post-Baccalaureate Certificates

The department administers the post-baccalaureate Community Development and Planning Certificate in consultation with the Illinois Institute for Rural Affairs (IIRA). The mission of this 18-sh certificate is to instill in students the knowledge and skills necessary to prepare for a career in the field of community development. The certificate is open to



all WIU graduate students. Similarly, the department administers the 18-sh postbaccalaureate GIS Analysis Certificate program, which is designed to train students to become qualified GIS analysts in their specialty fields or disciplines. Participating departments include Biological Sciences; Illinois Institute for Rural Affairs (IIRA); Recreation, Park and Tourism Administration; and Sociology and Anthropology. For Gainful Employment Disclosure, visit [wiu.edu/grad/gainfulemployment](http://wiu.edu/grad/gainfulemployment).

## Featured Alumni

Richard D. Ostrowski is a GIS technical specialist with National Information Systems Cooperative in Lake Saint Louis, MO. The company develops and supports software and hardware solutions for its member-owners, who are primarily utility cooperatives and telecommunications companies across the nation. Ostrowski provides GIS support for the company. He received his Master of Arts in Geography in Summer 2014.



*"The Geography graduate program at WIU was a great experience. It allowed me to have an opportunity to further learn GIS, while being empowered to apply this knowledge to real scenarios in the local community, through an internship with the GIS Center. This, along with the mentorship from my advisor and committee members, prepared me for the challenges that exist in a professional career. This allowed me to obtain, and excel in, a GIS position upon graduation."*

— Richard D. Ostrowski, 2014, GIS Technical Specialist  
National Information Systems Cooperative, Lake Saint Louis, Missouri