The Departments of Biological Sciences and Geography offer this interdisciplinary, skill-based program designed to provide students with an understanding of how environmental information is collected, what is being reported, and how to analyze what is reported. It provides training in basic concepts at all levels of ecology, from populations to landscapes and the interaction between the physical and biotic environment using the cutting edge technology of geographic information system (GIS) software.

Admission Requirements
Students applying for the certificate must have a cumulative undergraduate GPA of 2.75 or higher and an undergraduate degree in Biology, Geography, or a related field. Non-degree students seeking the certificate only must meet the admission requirements for the Graduate School; students seeking both a degree and the certificate must meet the admission requirements for their degree program.

Academic Requirements
Students must have a cumulative 3.0 GPA for all coursework required for completion of the certificate. A post-baccalaureate certificate will not be awarded to a student who earns more than 3 semester hours (sh) of C, D, F, or U grades in the graduate-level courses required for the completion of the certificate. No course for which a student has received a grade of D or less may be used to satisfy certificate requirements. Transfer work or course substitutions are not allowed in the certificate programs. The work required for the certificate must be completed within three calendar years.

If approved by the specific academic department, courses taken to satisfy certificate requirements may be used to satisfy post-baccalaureate degree requirements at the University.

Certificate Requirements
The program requires completion of 18 sh, including 12 sh of core courses. Students may select two elective courses (6 sh) to include one from Biology and one from Geography. For Gainful Employment Disclosure, visit wiu.edu/grad/gainfulemployment.

Career Opportunities
In the environmental field today, there are few jobs beyond the technician level that do not require a background in Geographic Information Systems (GIS). The Illinois Department of Natural Resources, Illinois Environmental Protection Agency, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service all require their mid-level employees to be familiar with the use and application of GIS to their particular missions. Potential career opportunities include the following:

• Resource development
• Environmental consulting
• Landscaping
• Working in state and federal agencies
• Urban planning
• Industrial or urban facility and site development
• Agricultural management

For Gainful Employment Disclosure, visit wiu.edu/grad/gainfulemployment.

Facilities
ESRI’s ArcMap software is installed on each of the computers in the computer teaching lab. This lab provides a quality one-on-one teaching environment with the latest technology.

The Nahant Marsh Preserve is one of the largest urban wetlands on the Upper Mississippi River. The approximately 262 acre preserve is comprised of marshy areas, mesic, wet and sand prairie, and bottomland forest. A spring-fed quarry, known as Carp Lake, and the surrounding grounds, are part of the Nahant Marsh Preserve as well. A boat landing provides direct access to the Mississippi River. The Nahant Marsh Preserve was used for...
skeet and trap shooting from the 1960s to the 1990s. Because of the lead left behind, the marsh was declared an EPA Superfund site and was cleaned up in 1999. After that time, the site was declared a preserve and educational center. River Action, Inc., among others, has been a key player in the development of the preserve. The building and about half of the land is owned and managed by the City of Davenport. The remaining land is held by the Nahant Board, a 501c3. The educational programming is overseen by the Eastern Iowa Community College district.

Western Illinois University is a important partner at the Nahant Marsh. Western classes and students use the field station and preserve as a living laboratory. The Nahant Marsh allows students the opportunity to experience a dynamic and unique ecosystem. The research conducted by students, in turn, provides valuable insight into the natural processes occurring at Nahant. The Nahant Marsh also offers a paid internship and volunteer opportunities for Western students.

**Distinctive Features**

- Courses focus on the application of the GIS to analyze and interpret ecological data.
- The program integrates training in GIS with training in the ecological techniques used to collect environmental data used interpretively by GIS.
- Students will be better qualified to use ecological information and GIS technology for effective planning land use and restoration. Examples might include floodplain and mine land reclamation, wetland and drainage restoration, energy development (e.g., wind farms), natural disaster recovery programs in both urban and ecological preserves, and natural lands management.

**Contact Information**

For admissions process and general program information, contact the School of Graduate Studies, Western Illinois University, 1 University Circle, Macomb, IL 61455, (309) 298-1806, (877) WIU GRAD toll-free, Grad-Office@wiu.edu, wiu.edu/grad.

For specific program questions, contact Dr. Charles Lydeard, Department Chairperson, Department of Biological Sciences, Western Illinois University, 1 University Circle, Macomb, IL 61455, (309) 298-1546, C-Lydeard@wiu.edu, wiu.edu/biology or Dr. Samuel Thompson, Department Chairperson, Department of Geography, Western Illinois University, 1 University Circle, Macomb, IL 61455, (309) 298-1648, geography@wiu.edu, wiu.edu/geography.

"I have learned a lot in this program and about topics that I am interested in, especially GIS. The staff has been very instructive and accommodating. I hope to get a job in GIS, especially since GIS is more and more in demand."

—Walt Zuurdeeg, MA Geography

Certificate Environmental GIS, May 2010