



WESTERN
ILLINOIS
UNIVERSITY

MASTER OF SCIENCE IN BIOLOGY

Higher Values in Higher Education
Academic Excellence • Educational Opportunity
Personal Growth • Social Responsibility

Biology is one of the most basic fields of science with direct application to humans. Our continued existence on the planet Earth will depend on how we resolve biological problems. Biology ranges in scale from biochemical processes inside individual cells to complex multicellular organisms to populations of organisms to ecosystems to the entire planet. A Master of Science in Biology allows our graduates to pursue careers in health care, biotechnology, conservation, government agencies, education, and a wide range of other fields.



Chicago Shedd Aquarium

Admission Requirements

All candidates must meet the general admission requirements of the School of Graduate Studies. Students selecting the biological sciences as a graduate major must have received a Bachelor's degree with work in biological sciences. Departmental approval may be contingent upon the student making up undergraduate deficiencies (undergraduate deficiencies can be taken as Pass/Fail, but they must be completed before graduation). All incoming students are expected to have three semesters of Chemistry (including Organic or Biochemistry) and three semesters of General Biology (focusing on Botany, Microbiology, and Zoology), plus two semesters each of the following: Physics or Geology (any sequence) and Mathematics. A semester each of Genetics, Ecology, and Cell Biology is also required. The department has no foreign language requirement for the Master of Science (MS) degree. Although the Graduate Record Examination is not required, students are encouraged to submit scores for both the General Test and the Subject Test in biology prior to admission. Acceptance to do graduate work in the department is dependent upon the following: a minimum GPA of 2.75 (unless waived by action of the Departmental Graduate Committee) or a GPA of 3.0 or higher for the last two undergraduate years, three letters of recommendation, and a written statement on the student's interests and career goals.

Degree Requirements

The MS degree in Biology can be earned by satisfying either the requirements of the thesis plan or the non-thesis plan. The thesis plan is designed for students who are interested in research and/or who wish to continue their education beyond the Master's degree. The non-thesis plan is recommended for students who want additional advanced training in the biological sciences but do not have research-oriented career goals. All students must complete an

original research project (non-thesis research projects are less intense than thesis projects; however, a non-thesis student can also complete an internship for their research requirement). All students must take 9 semester hours (SH) of our core courses. Thesis plan students will also take 10 SH related to their research, while non-thesis plan students will take 4 SH that are research-related. The remaining classes are electives (13 SH for the thesis option; 19 SH for the non-thesis option). There are a total of 32 SH required for graduation.

Career Opportunities

The career opportunities available to our graduates are as varied as biology itself. Potential careers open to our graduates include the following:

- Biotechnology industry
- Medicine
- Government conservation agencies such as the Department of Natural Resources, Fish, and Wildlife or the Environmental Protection Agency
- Private conservation organizations such as The Nature Conservancy
- Science education
- Museum curation
- Zoos and aquaria

Also, many of our MS graduate students further their education by pursuing advanced degrees or attending medical school.

Faculty Expertise

The Department of Biological Sciences has 22 faculty members with advanced degrees (six in Botany, three in Microbiology, 12 in Zoology, and one in Science Education). Faculty members have expertise in fungal infection in plants, landscape and fire ecology,

“Western Illinois University’s Department of Biological Sciences provides a foundation of academic and professional experiences that equips the graduate student with foundational skills and knowledge for future success.”

**WWW.WIU.EDU/BIOLOGY/
GRADUATE**

— Brian L. Sloss, MS, 1996

University of Wisconsin—Stevens Point



algal ecology and biogeography, plant ecology and taxonomy, large river vegetation and landscape ecology, plant genetics, molecular biology and antimicrobial activities of plants, virology and immunology, industrial microbiology, biology of aging, freshwater invertebrate ecology, functional morphology, neurobiology, plant-insect pathogen interactions, insect ecology, parasitology, plant-herbivore interactions, ornithology, herpetology, ichthyology, marine and terrestrial mammalogy, and science learning.

Assistantship Opportunities

The Biological Sciences department has several graduate assistantships available on the Macomb campus, and all degree-seeking students are eligible to apply for these assistantships. Students must fill out an assistantship application with the School of Graduate Studies. Criteria for awarding assistantships includes grade point average, individual skills as needed by the department, and a letter of recommendation. All assistantships come with a stipend and a tuition waiver.

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, or veteran status.

Facilities

The Department of Biological Sciences has a wide variety of laboratory equipment such as spectrophotometers, an electron microscope, and a DNA sequencer. The department’s computer teaching lab has 16 laptop computers along with a large-scale



Brian L. Sloss

plotter. Waggoner Hall, which houses the Department of Biological Sciences, has complete wireless Internet access. Waggoner Hall also has a large greenhouse and several climate-controlled rooms. There are many collections such as a plants, reptiles, and amphibians collection and a fish, mammals, and birds collection. The department also has access to several large natural areas for ecological research such as the LaMoine River (which runs right through campus) and the Fink Farm natural area. The Alice L. Kibbe Life Science Station, which is near Warsaw, Illinois, has 1,700 acres of natural area, which is a mix of restored prairie and woodlands. The research station borders the Mississippi River and has a wide variety of sampling equipment and boats, including a 28-foot pontoon style vessel and an electrofishing boat. The Biological Sciences department has relationships with both the Niabi Zoo in Moline, Illinois, and the Shedd Aquarium in Chicago, Illinois, which allows for unique classroom and research experiences.

Featured Alumni

My time in the program (MS, 1996) was vital in my development as a young scientist and educator. The faculty, the multidisciplinary curriculum, and the interaction with fellow graduate students fostered my own skills and provided me a better appreciation of all fields of biological sciences. The focus on a core curriculum at the graduate level is a central factor in consistently producing quality young scientists with diverse career opportunities. I believe strongly in the Biological Sciences program and am proud to have been able to continue my association with the program into my professional career.

— Brian L. Sloss, PhD, USGS–Wisconsin Cooperative Fishery Research Unit, College of Natural Resources, University of Wisconsin–Stevens Point

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, Grad-Office@wiu.edu, www.wiu.edu/grad.

For specific program questions, contact Dr. Timothy Spier, Graduate Coordinator, Department of Biological Sciences, Western Illinois University, 1 University Circle, Macomb, IL 61455, (309) 298-1266, TW-Spier@wiu.edu, www.wiu.edu/biology.