

GRADUATE

Biological Sciences

College of Arts and Sciences
Department of Biological Sciences

SIUE



siue.edu/grad/biological-sciences

Biological Sciences at SIUE

Students may pursue a concentration in a variety of areas, including:

- Cellular and molecular biology
- Anatomy and physiology
- Genetics
- Evolution and ecology

Departmental facilities and outdoor venues on our beautiful campus provide excellent opportunities for innovative biological study. The outdoor classroom consists of a 75-acre lake, a 35-acre botanical garden and 380 acres of forest and restored grasslands set aside as a nature preserve. The Department of Biological Sciences is located in Science Building West, a modern, science education facility with fully equipped teaching and research labs. The Department includes extensive botanical and zoological teaching collections, and is equipped with **state-of-the-art technology** in:

- Microscopy
- Physiology
- Histology
- Cell biology
- Microbiology
- Genetics
- Toxicology research

Opportunities for plant and animal research are available in our greenhouse and vivarium facilities.

Degrees Available at SIUE

- Master of Science in Biological Sciences
- Master of Arts in Biological Sciences
- A secondary education biology teaching focus is available with our Master of Science in Education (MSEd) in curriculum and instruction.

Program Format

Coursework is offered as traditional daytime courses with some early evening offerings.

What can I do with a degree in biological sciences?

Numerous career and advanced training opportunities are available to persons holding a master's degree in biology, including:

- Doctoral training in biology and the health sciences
- Secondary and junior college teaching
- Environmental assessment
- Employment in educational, industrial, and governmental laboratories and agencies

Graduate degrees expand opportunities and salary ranges, and biology graduates are in high demand. Particularly strong career growth is present in the fields of:

- Genetics
- Forensic research
- Environmental biology

Admission Requirements

- Graduate School application and \$40 fee
- Submission of all postsecondary academic transcripts
- Successful completion of a bachelor's degree prior to enrollment
- GPA of at least 2.8 on 4.0 scale preferred

SOUTHERN ILLINOIS UNIVERSITY
EDWARDSVILLE
GRADUATE SCHOOL

Admission Requirements Cont.

- International Applicants: Proof of English Proficiency, minimum requirements are TOEFL (79), IELTS (6.5) or equivalent
- Statement of Purpose: A personal letter/statement summarizing the applicant's preparation and experience leading to the undertaking of a master's program of study at SIUE, and outlining the applicant's academic and career goals, highlighting the role that a master's degree in biological sciences at SIUE will serve in meeting those goals.
- At least two letters of recommendation, not including the prospective faculty mentor, preferably from instructors and/or individuals who are familiar with the applicant's academic and professional preparation for undertaking a master's program in the biological sciences (submitted directly by the recommenders).
- A faculty mentor's written agreement, submitted directly by the SIUE faculty member
- Applicants with an undergraduate GPA below 2.8 on a 4.0 scale should provide additional justification for admission with clear evidence of potential for success. This may include, but is not limited to: General GRE scores completed within the previous two years, documented relevant work experiences, additional justification by a prospective faculty mentor, explanation of prior coursework record, and successful relevant graduate coursework. These applicants should contact the Graduate Program Director (bio_grad@siue.edu) on initiating an application with notice of the additional items that will be submitted for review.

Program application materials may be uploaded during the application process, but official transcripts must be sent directly from the school attended and test scores must be verifiable with the appropriate testing service. Please contact the Graduate Admissions Office with questions regarding the application submission process at graduateadmissions@siue.edu.

All applicants must have a faculty member agree in writing to serve as a graduate mentor in order to be considered for acceptance. Therefore, applicants are encouraged to identify and contact prospective graduate mentors (siue.edu/artsandsciences/biologicalsciences/faculty-staff/faculty), preferably when all other application materials have been submitted, and to contact the biological sciences graduate program director (bio_grad@siue.edu) for assistance, if needed.

Students accepted into the biological sciences graduate program are expected to have completed coursework equivalent to the SIUE undergraduate biology degree requirements, or they may be expected to resolve any deficiencies by completing coursework beyond that required for the graduate degree. Upon admission to the program, the student shall consult with their mentor to review the student's academic record and develop a plan of coursework that will address any academic deficiencies.

For full consideration for assistantship support, all application materials including the mentor's written agreement should be submitted by February 1 for the following fall semester, and September 1 for the following spring semester. Applications received after these dates will be considered for any remaining funding. The February 1 and September 1 dates are strongly recommended for all international applications to permit sufficient time for the approval process and visa requirements to be completed.

Graduation Requirements

For the final examination in biological sciences for either the Master of Arts (MA) or the Master of Science (MS), students meet with their advisory committee for a public oral defense of the thesis or research paper.

Required Credit Hours/Tuition and Fees

- 32
- Visit siue.edu/graduate-tuition for detailed tuition information

Curriculum

Master of Arts (MA): A student may earn an MA while following the thesis plan. The MA requires a minimum of 32 semester hours, of which at least 24 semester hours must be in biology. The MA also requires a reading knowledge of a foreign language. The foreign language requirement must be met at least three months prior to graduation by passing an examination offered by the Department of Foreign Languages and Literature.

Master of Science (MS): Thesis and non-thesis plans of study are available for fulfillment of the requirements of the MS. The thesis and non-thesis plans require a minimum of 32 semester hours, of which at least 24 semester hours must be in biology. There is no foreign language requirement for the MS.

Thesis Plan

- At least nine semester hours in biology must be earned in courses numbered BIOL 415-490 or 514-590
- Required courses: BIOL 501, 502, and 503 must be completed. BIOL 595 or 596 must be completed twice, or in combination, and must be taken under at least two different faculty members. Completion of BIOL 592 at least twice is required.
- Electives: Eight additional elective semester hours may be needed to reach 32 semester hours.
- Thesis: Students must complete a thesis based on their original research, and must enroll in at least three semester hours of BIOL 599.

Non-Thesis Plan

- At least 14 semester hours in biology must be earned in courses numbered BIOL 415-490 or 514-590
- Required courses: BIOL 501, 502, and 503 must be completed. BIOL 595 or 596 must be completed twice, or in combination, and must be taken under at least two different faculty members. Completion of BIOL 592 at least twice is required.
- Electives: Two additional elective semester hours may be needed to reach 32 semester hours.
- Research Paper: At least four, but no more than eight semester hours must be taken in BIOL 591 and 593, culminating in an acceptable final research paper.

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