

BIOLOGY, M.A.

Saint Louis University's Master of Arts in Biology is designed to prepare graduates for further training or careers in academic, private or government sectors.

Program Highlights

- The SLU program emphasizes coursework and does not require a thesis.
- Students applying generally desire to broaden their knowledge or become more competitive in seeking employment or gaining admission into a health science program (medical school, dentistry school, etc.).
- In addition to the M.A. in biology, SLU also offers an M.S. in biology (<https://catalog.slu.edu/colleges-schools/arts-sciences/biology/biology-ms/>) that offers experience in laboratory research, including experimental design, interpretation of data and scientific writing. For those who want to continue their studies after completing the M.A., Saint Louis University's Department of Biology (<https://www.slu.edu/arts-and-sciences/biology/>) also offers a Ph.D. in biology (<https://catalog.slu.edu/colleges-schools/arts-sciences/biology/biology-phd/>).
- Biology students at Saint Louis University have access to excellent facilities on campus and at the University's Reis Biological Station (<https://www.slu.edu/arts-and-sciences/biology/reis-biological-station/>). Collaborations with neighboring institutions such as Washington University in St. Louis, University of Missouri-St. Louis, Missouri Botanical Garden, Saint Louis Zoo and Danforth Plant Science Center further expand possibilities for research and learning.

Curriculum Overview

The M.A. in biology requires at least 30 post-baccalaureate credits. Coursework may be chosen from a wide variety of fields, including cell and molecular biology, biochemistry, microbiology, physiology, geographic information systems, ecology, evolution and botany.

Careers

Past students have gone on to further study in medical or law school, or to careers as research scientists, teachers and in various capacities in pharmaceutical companies and government agencies.

Admission Requirements

Applicants should possess adequate undergraduate preparation in biology or a related discipline with a minimum 3.0 GPA in science and math courses. Research experience can bolster applications when the 3.0 GPA minimum is not met.

Suggested courses include biology (a minimum of 18 upper-division credits); chemistry (a minimum of eight, upper-division credits, including two semesters of organic chemistry or one semester of organic chemistry and the other of biochemistry); physics (two semesters); mathematics (through a course in calculus). A formal minor is not permitted.

Application Requirements

- Application form and fee
- Three letters of recommendation
- Transcript(s)

- Résumé
- Goal statement
- Interview (desired)

Requirements for International Students

All admission policies and requirements for domestic students apply to international students. International students must also meet the following additional requirements:

- Demonstrate English Language Proficiency (<https://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency/>)
- Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include:
 - Courses taken and/or lectures attended
 - Practical laboratory work
 - The maximum and minimum grades attainable
 - The grades earned or the results of all end-of-term examinations
 - Any honors or degrees received.
- WES and ECE transcripts are accepted.
- In order to be issued an I-20 for your F-1 visa application, students must submit financial documents. Proof of financial support that must include:
 - A letter of financial support from the person(s) or sponsoring agency funding the student's time at Saint Louis University
 - A letter from the sponsor's bank verifying that the funds are available and will be so for the duration of the student's study at the University

Review Process

Faculty committee members examine each applicant's materials and make recommendations.

Tuition

Tuition	Cost Per Credit
Graduate Tuition	\$1,370

Additional charges may apply. Other resources are listed below:

Net Price Calculator (<https://www.slu.edu/financial-aid/tuition-and-costs/calculator.php>)

Information on Tuition and Fees (<https://catalog.slu.edu/academic-policies/student-financial-services/tuition/>)

Miscellaneous Fees (<https://catalog.slu.edu/academic-policies/student-financial-services/fees/>)

Information on Summer Tuition (<https://catalog.slu.edu/academic-policies/student-financial-services/tuition-summer/>)

Scholarships and Financial Aid

For more information about Saint Louis University scholarships and financial aid, please visit the Office of Student Financial Services (<https://www.slu.edu/financial-aid/>).

Learning Outcomes

1. Graduates will be able to critically analyze primary literature articles by evaluating the scientific contributions of peer-reviewed publications in biology.
2. Graduates will be able to effectively communicate scientific ideas.
3. Graduates will be able to demonstrate professional integrity.

Requirements

SLU's M.A. in biology degree requires a minimum of 30 credits of post-baccalaureate coursework but does not require a thesis. The expectation of the biology department is that students will complete the degree in two years, though up to five years are allowed by the Office of Graduate Education. The following requirements govern which courses may be counted toward a degree:

- At least 20 credits of structured courses (does not include reading courses or problems courses).
- At least 24 credits must be 5000- and 6000- level courses.
- At least 12 credits of the total program must be from the biology department and 15 credits must be directly related to biology.
- At least 24 credits must be completed in residence (i.e. no more than six transfer credits).
- No more than six credits of BIOL 5970 Research Topics (1-3 cr) and/or BIOL 5980 Graduate Independent Study in Biology (1-3 cr).
- Graduate seminar course (BIOL 5820 Graduate Seminar in Cell and Molecular Regulation (1-2 cr) or BIOL 5840 Graduate Seminar in Ecology, Evolution and Systematics (1 cr)) for two semesters
- Departmental seminar (BIOL 5810 Department Seminar (1 cr)), must be taken each semester enrolled).
- Students must be enrolled in a course (even if it is for zero credits) every fall and spring semester to maintain standing in the program; students on 11-month assistantships must also enroll in the summer.

Code	Title	Credits
Seminars		
BIOL 5810	Department Seminar (every semester)	1
BIOL 5820	Graduate Seminar in Cell and Molecular Regulation	1-2
or BIOL 5840	Graduate Seminar in Ecology, Evolution and Systematics	
Elective Courses		27
Students elective credit may vary depending on how many semesters of seminar they take and how long they are in the program. Total credits between electives and seminars must total at least 30.		
Elective courses (p. 2)		
Total Credits		30

Elective Courses

Electives can be selected from any 4000-level or higher courses in biology or related areas (subject to limits on 4000-level, 5970, and 5980 credit hours). Among the courses that can be taken as electives are:

Code	Title	Credits
BIOL 4090	Plant Ecology	3
BIOL 4100	Natural History of Vertebrates	4
BIOL 4120	Field Botany	5

BIOL 4130	Field Mammalogy	5
BIOL 4140	Field Ornithology	5
BIOL 4160	Microbial Ecology and Molecular Evolution	4
BIOL 4200	Aquatic Ecology	4
BIOL 4260	Biology of Amphibians and Reptiles	4
BIOL 4280	Biology of Fishes	4
BIOL 4320	Cave Biology	4
BIOL 4330	Spring Flora of the Ozarks	4
BIOL 4360	Animal Behavior	3
BIOL 4370	Animal Behavior Lab	1
BIOL 4410	Comparative Animal Physiology	3
BIOL 4440	Vertebrate Histology: Structure and Function of Tissues	4
BIOL 4480	Conservation Biology	3
BIOL 4540	Human Systemic Physiology	3
BIOL 4640	General Microbiology	3
BIOL 4650	General Microbiology Laboratory	2
BIOL 4720	Cancer Biology	3
BIOL 4910	Internship in Conservation	3
BIOL 4912	Internship in Plant Science	3
BIOL 5000	Problems in Vertebrate Morphology	2-3
BIOL 5030	Genomics	3
BIOL 5050	Molecular Techniques Lab	2
BIOL 5070	Advanced Biological Chemistry	3
BIOL 5080	Advanced Cell Biology	3
BIOL 5090	Biometry	4
BIOL 5190	Geographic Information Systems in Biology	3
BIOL 5350	Current Topics in Cell Biology	2
BIOL 5400	Problems in Genetics	1-4
BIOL 5480	Conservation Biology	3
BIOL 5550	Advanced Ecology	3
BIOL 5560	Advanced Evolution	3
BIOL 5610	Principles of Develop Biology	3
BIOL 5630	Concepts of Immunobiology	3
BIOL 5640	Advanced Microbiology	3
BIOL 5670	Advanced Population Biology	3
BIOL 5700	Advanced Molecular Biology	3
BIOL 5780	Molecular Phylogenetic Analysis	3
BIOL 5820	Graduate Seminar in Cell and Molecular Regulation	1-2
BIOL 5840	Graduate Seminar in Ecology, Evolution and Systematics	2
BIOL 6150	Neural Basis of Behavior	3

Continuation Standards

Students must maintain a cumulative grade point average (GPA) of 3.00 in all graduate/professional courses.

Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

General Schedule

Course	Title	Credits
Year One		
Fall		
4000/5000 level electives ¹		6
BIOL 5810	Department Seminar	0
Credits		6
Spring		
4000/5000 level electives		6
BIOL 5810	Department Seminar	0
BIOL 5820 or BIOL 5840	Graduate Seminar in Cell and Molecular Regulation or Graduate Seminar in Ecology, Evolution and Systematics	2
Credits		8
Summer		
BIOL 5980	Graduate Independent Study in Biology (Optional)	1
Credits		1
Year Two		
Fall		
4000/5000 level electives		6
BIOL 5810	Department Seminar	0
BIOL 5820 or BIOL 5840	Graduate Seminar in Cell and Molecular Regulation or Graduate Seminar in Ecology, Evolution and Systematics	2
Credits		8
Spring		
4000/5000 level electives		7
BIOL 5810	Department Seminar	0
Credits		7
Total Credits		30

¹ A maximum of 10 hours of 4000-level courses can counted toward the MA; please see program notes for detailed requirements and a sample schedule of electives.

Sample Schedule

Course	Title	Credits
Year One		
Fall		
BIOL 5030	Genomics	3
BIOL 5700	Advanced Molecular Biology	3

BIOL 5810	Department Seminar	0
Credits		6
Spring		
BIOL 4250	Neurobiology of Disease	3
BIOL 5070	Advanced Biological Chemistry	3
BIOL 5820	Graduate Seminar in Cell and Molecular Regulation	2
BIOL 5810	Department Seminar	0
Credits		8
Summer		
BIOL 5980	Graduate Independent Study in Biology	1
Credits		1
Year Two		
Fall		
BIOL 5190	Geographic Information Systems in Biology	3
BIOL 5640	Advanced Microbiology	3
BIOL 5840	Graduate Seminar in Ecology, Evolution and Systematics	2
BIOL 5810	Department Seminar	0
Credits		8
Spring		
BIOL 5630	Concepts of Immunobiology	3
BIOL 5090	Biometry	4
BIOL 5810	Department Seminar	0
Credits		7
Total Credits		30

Contact Us

For additional information about graduate study in biology, contact biology@slu.edu or call 314-977-3900 and ask for the graduate program coordinator.