Choose UMSL

And your major.

Biology BS

The B.S. degree in biology is designed to prepare students for basic technical positions and graduate studies in the life sciences. Candidates for the degree have the same core courses and general education requirements as those seeking the Bachelor of Arts degree, as well as additional requirements in depth of study, laboratory experience, communication skills, and background in associated science areas.

Career Outlook

Students with a B.S. degree in biology have diverse career opportunities. Graduates are often hired by local companies specializing in biotechnology, conservation, and basic science research. Many graduates pursue diverse professional degrees including dentistry, law, medicine, optometry, pharmacy, and podiatry. Numerous graduates also reach advanced research positions by undertaking additional scientific training in masters and doctoral programs in the biological sciences.

Future Career Options

- Laboratory or Field Research Assistant/ Scientist
- Health Sciences Professional
- Medical and Technical Sales and Support Representative
- Environmental Educator
- Regulatory/Government Affairs Specialist
- Teacher/Professor
- Conservation Biologist
- Professional Health Careers including physicians, dentists, veterinarians, physician's assistants, and physical therapists

Skills developed by degree completion

- Understand content areas of anatomy, botany, cell and molecular biology, ecology, evolutionary biology, microbiology, physiology and zoology
- Perform laboratory experiments
- Formulate hypotheses, design experiments and evaluate data
- Identify, create and critically evaluate information
- Present scientific concepts and information
- Objectively evaluate and report data

4-YEAR ACADEMIC MAP

Successful alumni have gone on to fulfill many of the opportunities above. Additional possibilities are taken from the Bureau of Labor Statistics.
Contact an advisor to discuss additional future career options.

UMSL | Arts & Sciences
University of Missouri–St. Louis

College of Arts and Sciences
Department of Biology
223 Research Building
314-516-6200
umsl.edu/~biology/

Academic Advising
303 Lucas Hall
314-516-5501
artscience@umsl.edu
umsl.edu/cas/advising

Bachelor of Science in Biology

Year 1

FALL SEMESTER *(14 credit hours)*

- BIOL 1800: Introduction to the Biology Major (1)
- ENGL 1100: First-Year Writing (3)
- GEN ED CORE: US History & Government (3)
- MATH 1030: College Algebra (3)
- GEN ED EXPLORE: Social Sciences (3)
- INTDSC 1003: University Studies (1)

SPRING SEMESTER *(15 credit hours)*

- MATH 1035: Trigonometry (2)
- BIOL 1821: Introductory Biology: Organisms and the Environment (5)
- CHEM 1111: Introductory Chemistry I (5)
- COMM 1040: Introduction to Public Speaking (3)

Year 2

FALL SEMESTER *(16 credit hours)*

- BIOL 1831: Introductory Biology: From Molecules to Organisms (5)
- CHEM 1121: Introductory Chemistry II (5)
- MATH 1100: Basic Calculus (3)
- GEN ED EXPLORE: Humanities & Fine Arts (3)

SPRING SEMESTER *(14 credit hours)*

- BIOL 2012: Genetics (3)
- BIOL 2012: Genetics Laboratory (2)
- CHEM 2612: Organic Chemistry (3)
- MATH 1320: Introduction to Probability and Statistics (3)
- GEN ED EXPLORE: Social Sciences (3)

Year 3

FALL SEMESTER *(15 credit hours)*

- BIOL 2000+: Biology Lecture Elective (3)
- BIOL 2000+: Biology Laboratory Elective (2)
- BIOL 3302: Introduction to Evolution (3)
- CHEM 2622: Organic Chemistry II or CHEM 4712/BIOL 4712 Biochemistry (3)
- PHYSICS 1011: Basic Physics I (3)
- PHYSICS 1011L: Basic Physics I Laboratory (1)

SPRING SEMESTER *(15 credit hours)*

- BIOL 2000+: Biology Lecture Elective (3)
- BIOL 2000+: Biology Laboratory Elective (2)
- CHEM 2223: Quanitative Analysis or CHEM 2633 Organic Chemistry Lab (3)
- PHSYICS 1012: Basic Physics II Lecture (3)
- PHYSICS 1012L: Basic Physics II Laboratory (1)
- GEN ED EXPLORE: Humanities & Fine Arts (3)

Year 4

FALL SEMESTER *(14 credit hours)*

- BIOL 3622: Cell Biology (3)
- BIOL XXXX: Biology Diversity Lecture Elective (3)
- BIOL XXXX: Biology Laboratory Elective (2)
- BIOL 4XXX: 4000-Level Biology Lecture Elective (3)
- GEN ED EXPLORE: Humanities & Fine Arts (3)

SPRING SEMESTER *(17 credit hours)*

- BIOL 4889: Senior Seminar (2)
- BIOL 4XXX: 4000-Level Biology Lecture Elective (3)
- ENGL 3160: Writng in the Sciences (3)
- PHIL 2256: Bioethics or PHIL 3380 Philosophy of Science (3)
- GEN ED EXPLORE: Social Sciences (3)
- Cultural Diversity (3)

Degree completed!

Last Updated May 2023

2023-2024 4-YEAR ACADEMIC MAP

This is a sample academic map for the courses to take each academic semester/session. ***This map is not a substitute for academic advisement.*** Contact your advisor when making final selections.

– University Studies is required for all first-year students and those with less than 24 credit hours.

– Milestone courses should be taken in the order shown to ensure you stay on a timely and accurate path toward graduation.

– Summer and Intersession courses Don't forget that summers and winter breaks are a way to fast-track your route to degree completion – and lighten your load during fall and spring!