

Biology BA

The B.A. degree provides maximum flexibility for biology majors to pursue an undergraduate liberal arts course of study that can lead to professional careers in ~~medicine, allied health, public and environmental health, law, and graduate studies~~ in the life sciences. Candidates must have a cumulative grade point average of 2.0 or better in biology courses. Candidates must also earn a minimum grade of C- in all core courses.

All B.A. degree majors must take at least 40 credit hours, but not more than 50 hours, in appropriate biology course work. A minimum of 18 hours at or above the 2000 level (including one laboratory) must be taken in residence in the UMSL Department of Biology in order to receive a B.A. degree from the College of Arts and Sciences with a major in biology.

Lecture and Seminar Course Requirements

The following biology courses or their equivalents are required:

Core

BIOL 1800	Introduction to the Biology Major	1
BIOL 1821	Introductory Biology: Organisms and the Environment (MOTR BIOL 150L)	5
BIOL 1831	Introductory Biology: From Molecules to Organisms (MOTR BIOL 150L)	5
BIOL 2012	Genetics	3
BIOL 3302	Evolution	3
BIOL 3622	Cell Biology	3
Biological Diversity		3-5

Select one of the following diversity courses:

BIOL 2102	Ecology
BIOL 2402	Vertebrate Anatomy

BIOL 2482	Microbiology	
BIOL 2501		
BIOL 4402	Ornithology	
BIOL 4422	Entomology	
BIOL 4501		
Capstone		2-3 4
Select one of the following:		
BIOL 4889	Senior Seminar	
SEC ED 4985	Curriculum and Methods of Teaching Life Sciences	
Total Hours		25-29 26

Elective Courses

Three additional biology lecture courses, at the 2000 level or higher are required. They may be selected from any of the lecture or lecture-laboratory courses offered. Selection of these courses should reflect the career interest of the student.

Biochemistry CHEM 4712 can also be used toward satisfying this requirement.

~~Biology courses taken to fulfill basic skill requirements (e.g., statistics requirement or biochemistry option) can be used to satisfy this requirement.~~ At least two ~~biology lecture courses taken as part of the core or as electives~~ of these ~~courses~~ must be at the 4000 level or higher. No more than one of these higher-level courses can be used to fulfill other requirements (e.g., diversity options, ~~or~~ statistics requirements, or biochemistry option). ~~Biochemistry CHEM 4722 can also be used toward satisfying this requirement. BIOL 4905 or BIOL 4915 can be applied to the electives requirement but two 4000 level lecture courses are still required.~~

Laboratory Course Requirements

Three biology laboratory courses at the 2000 level or higher are required. They may be taken from any of the lecture-laboratory or laboratory courses offered. Two credit hours of BIOL 3699, BIOL 4299, BIOL 4905, or BIOL 4915 (no combination of these courses allowed) can be used to fulfill one laboratory requirement. Students may take CHEM 4733 to satisfy one of these laboratory

course requirements, but students may not use both BIOL 4713 and CHEM 4733 to fulfill this requirement.

Communication Skills:

Courses in foreign languages and in writing are required for development of the basic communication skills needed to transmit scientific information. The following satisfy this requirement:

Foreign Language

The foreign language requirement of the College of Arts & Sciences fulfills the departmental requirement.	3
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Writing

ENGL 3160	Writing in the Sciences (strongly preferred)	3
or ENGL 3100	Junior-Level Writing	

Total Hours	6
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Associated Science Area

The following courses or their equivalents must be successfully completed in science areas related to biology:

PHYSICS 1011	Basic Physics I	3
PHYSICS 1011L	Basic Physics I Laboratory	1
PHYSICS 1012	Basic Physics II	3
PHYSICS 1012L	Basic Physics II Laboratory	1
CHEM 1111	Introductory Chemistry I (MOTR CHEM 150L)	5
CHEM 1121	Introductory Chemistry II	5
CHEM 2612	Organic Chemistry I	3
MATH 1310		3
MATH 1035	Trigonometry	2

MATH 1100	Basic Calculus	3-5
or MATH 1800	Analytic Geometry and Calculus I	
Select one of the following advanced Chemistry courses:		2-3
CHEM 2223	Quantitative Analysis in Chemistry	
CHEM 2622	Organic Chemistry II	
CHEM 2633	Organic Chemistry Laboratory	
BIOL 4732	Principles of Biochemistry	
Select one of the following statistics options:		3-4
BIOL 4122	Biostatistics	
MATH 1310		
MATH 1320	Introduction to Probability and Statistics	
Total Hours		34-36 31-35

Justification for request:

Request includes the following updates to clarify our degree program:

- removing courses for the Diversity requirement that were no longer offered
- clarifying language about the number of classes that can count for two requirements