

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 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 coursework.~~ A minimum of 18 hours at or above the 2000 level, (including one laboratory) and one 4000 level elective, 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 150LEC)	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
Capstone		2-3

Select one of the following:

BIOL 4889	Senior Seminar
SEC ED 4985	Curriculum and Methods of Teaching Life Sciences

Elective Courses

Four 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.

At least two of these courses must be at the 4000 level or higher **with at least one taken in residence from the UMSL Department of Biology**. No more than one of these higher-level courses can be used to fulfill other requirements (e.g. statistics requirements or biochemistry option).

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	

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 1030	College Algebra (MOTR MATH 130)	3
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 1320	Introduction to Probability and Statistics	
Total Hours		32-36

Justification for request:

We are doing 2 things here: 1. Adding the requirement for one 4000 level elective in Biology to be taken in residence from UMSL Department or Biology. We are adding this because we had a student transfer in all of her 4000 level bio classes and complete a degree without a 4000 level elective at UMSL. After discussion with faculty, we all agreed that we want our students to take at least one of our high level electives at UMSL. 2. We are removing credit hour minima. We have reorganized our requirements and curriculum such that if all the coursework is completed, the credit hour minimum is met. One reason for doing this is that transfer students often take equivalent lectures and labs that are one credit hour fewer than our versions. Hence, we are constantly requesting exceptions for credit hour requirements for most transfers. This will eliminate the need to request exceptions in these scenarios.