

BIOLOGY MINOR

Minor - Biology

College of Humanities & Sciences

Degree Specific Credits: 25

Required Cumulative GPA: 2.0

Catalog Year: 2018-2019

Summary

Code	Title	Hours
	Biology/Microbiology Lower-Division Core	17
	Upper-Division Biology Requirement for the Minor	8
	Teaching Biology Track	
	Total Hours	25

Biology/Microbiology Lower-Division Core

Note: The lower-division core should be completed before attempting most upper division BIO- courses. AP Biology credit with a score of 3 may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

Code	Title	Hours
Complete all of the following courses:		
BIOB 160N	Principles of Living Systems	3
BIOB 161N	Prncpls of Living Systems Lab	1
BIOB 170N	Prncpls Biological Diversity	3
BIOB 171N	Prncpls Biological Dvrsty Lab	2
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
	Total Hours	17

Minimum Required Grade: C-

Upper-Division Biology Requirement for the Minor

Note: These eight credits may not include BIOC, BCH, or BIOM courses.

Code	Title	Hours
Complete 8 credits in courses with the following rubrics:		
BIOB		8
BIOE		
BIOH		
BIOL		
BIOO		
	Total Hours	8

Minimum Required Grade: C-

Teaching Biology Track

Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
 - Secondary Education Licensure Program (<http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php>)
 - Licensure Degree Requirements (<http://catalog.umt.edu/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure>)
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.

Upper-Division Core Courses Required by the Biology Teaching Track

Code	Title	Hours
Complete all of the following courses:		
BIOM 360	General Microbiology	3
BIOM 361	General Microbiology Lab	2
	Total Hours	5

Minimum Required Grade: C-

Required Content Courses Outside of the Major

Mathematics - Calculus

Note: Choose M 171, if you plan to take additional calculus courses, or if you plan a double major or minor in a field that requires more calculus (e.g. math, physics, biochemistry, computer science).

Code	Title	Hours
Complete one of the following courses:		
M 162	Applied Calculus	4
M 171	Calculus I	
	Total Hours	4

Minimum Required Grade: C-

Mathematics - Statistics

Code	Title	Hours
Complete the following course:		
STAT 216	Introduction to Statistics	4
	Total Hours	4

Minimum Required Grade: C-

Chemistry

Code	Title	Hours
Complete all of the following courses:		
CHMY 121N	Introduction to General Chemistry	3
CHMY 123	Introduction to Organic and Biochemistry	4
CHMY 485	Laboratory Safety	1
Total Hours		8

Minimum Required Grade: C-

Environmental Geosciences

Code	Title	Hours
Complete one of the following courses:		3
GEO 103N	Introduction to Environmental Geology	
GEO 105N	Oceanography	
Total Hours		3

Minimum Required Grade: C-

Education

Note: The course number EDU 497 covers many different teaching method courses. The section of EDU 497 entitled "Methods: 5 - 12 Science" is required for the Teaching Biology minor.

Code	Title	Hours
Complete the following course:		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

Secondary Teaching Licensure

Note: For endorsement to teach biology, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure (<http://catalog.umt.edu/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure>). For more information, see the Teaching and Learning Department (<http://catalog.umt.edu/colleges-schools-programs/education-human-sciences/teaching-learning>).