

# BIOLOGY MINOR

## Minor - Biology

### College Humanities & Sciences

Degree Specific Credits: 25

Required Cumulative GPA: 2.0

Catalog Year: 2017-2018

## Summary

Biology/Microbiology Lower Division Core	17
Upper Division Biology Requirement for the Minor	8
Total Hours	25

### Biology/Microbiology Lower Division Core

**Rule:** All of the following courses are required.

**Note:** The lower division core should be completed before attempting most upper division BIO- courses.

AP Biology may be substituted for either BIOB 160N/BIOB 161N or BIOB 170N/BIOB 171N.

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

**Rule:** Complete 8 credits of Upper Division in Biology (BIOB, BIOE, BIOH, BIOL, or B100)

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

Minimum Required Grade: C-

8 Total Credits Required

### Teaching Biology Track

A teaching minor is an academic minor which may contain different course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete a teaching major in a content area plus the teacher preparation program through the Department of Curriculum and Instruction. Additional teaching areas can be added through completion of either a teaching major or a teaching 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/past-catalogs/2017-2018/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure>)

To sign up for this option, you need to contact the Curriculum and Instruction Department. Do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this option must come from the Curriculum and Instruction Department.

Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publication and are used for advising purposes only. You do not fill out a major change for a track.

**Note:** In order to be licensed to teach secondary biology, students must be admitted to the Teacher Education Program through the Phyllis J. Washington College of Education and Human Sciences.

### Upper Division Core Courses Required by the Biology Teaching Minor

**Rule:** All of the following courses are required.

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

Minimum Required Grade: C-

#### Mathematics - Calculus

**Rule:** Complete one of the following calculus courses

**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).

M 162	Applied Calculus	4
or M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

#### Mathematics - Statistics

**Rule:** The following course is required

STAT 216	Introduction to Statistics	4
Total Hours		4

Minimum Required Grade: C-

#### Chemistry

**Rule:** All of the following courses are required

CHMY 121N	Introduction to General Chemistry	3
CHMY 123	Introduction to Organic and Biochemistry	3.000

CHMY 485	Laboratory Safety	1
Total Hours		7

Minimum Required Grade: C-

### **Environmental Geosciences**

**Rule:** Complete one of the following courses

GEO 105N	Oceanography	3
or GEO 103N	Introduction to Environmental Geology	
Total Hours		3

Minimum Required Grade: C-

### **Education**

**Rule:** The following course is required

**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.

EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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### **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 (see the College of Education & Human Sciences (<http://catalog.umt.edu/past-catalogs/2017-2018/colleges-schools-programs/education-human-sciences>))