

# Genetics Minor

Genetics is a fundamental topic in biology and an important component of many biological disciplines. Montana State University offers a wide variety of genetics courses taught by faculty in five departments (Animal and Range Science, Cell Biology and Neuroscience, Ecology, Microbiology and Immunology, and Plant Sciences and Plant Pathology). A Genetics Minor is available to students majoring in these departments.

In order to earn a Genetics Minor, a student must take 13 units of required courses and 15 units of elective courses (see below) and must earn a grade of at least C- in every course. Students interested in this minor should consult the genetics advisor within each department to decide whether the Genetics Minor is appropriate for them and to help select specific courses. Course requirements for the Genetics Minor are consistent across all departments.

## Required Courses

BIOB 160	Principles of Living Systems	4
or BIOB 260	Cellular and Molecular Biology	
BIOB 375	General Genetics	3
or BIOH 320	Biomedical Genetics	
BIOB 480	Conservation Genetics	3
or BIOB 484	Population Genetics	
STAT 216Q	Introduction to Statistics	3
or BIOB 318	Biometry	

## Elective Courses

Choose 15 credits from the following:		15
AGSC 441	Plant Breeding & Genetics (3)	
ANSC 322	Principles of Animal Breeding and Genetics (3)	
BCH 444R	Biochemistry & Molecular Biology Methods (3)	
BIOB 420	Evolution (3)	
BIOB 428	Molecular Evolution (3)	
BIOB 430	Plant Biotechnology (3)	
BIOB 476R	Gene Construction (4)	
BIOB 477	Genome Science and Gene Expression	
BIOB 480	Conservation Genetics (3 if not taken as a requirement)	
BIOB 484	Population Genetics (3 if not taken as a requirement)	
BIOH 420	Molecular Genetics	
BIOH 422	Genes and Cancer (3)	
BIOH 455	Molecular Medicine (3)	
BIOH 465R	Gene Expression Lab: From Genes to Proteins to Cells (3)	
BIOM 410	Microbial Genetics (3)	
BIOM 415	Microbial Diversity, Ecology, and Evolution (3)	
BIOM 435	Virology	
BIOM 450	Microbial Physiology (3)	
BIOM 455R	Research Mthds in Microbiology (4)	
BIOO 435	Plant Systematics (3)	

Total Credits 28

## Requirements for Admission to Upper Division Courses in Biology

For admission to upper division (numbered 300 or higher) Biology (BIOB, BIOE, BIOO, BIOM) and Fish and Wildlife Management (WILD) courses, students must have completed at least 45 total university credits with a **cumulative GPA of at least 2.5** for all courses and have also earned a "C-" or better for any prerequisite courses. Limited exceptions may be made by consent of instructor. Any student who obtains enrollment in an upper division biology course without satisfying these requirements will be required to withdraw from the course. Specific courses may have additional prerequisites.

### **Font Notice**

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.