

# Biology

## Program Type

Major

## Required Biology Courses

Course Code	Title	Hours
BIO 200	Cellular and Molecular Biology	4
BIO 201	Evolution and Biological Diversity	4
BIO 250	General Ecology	3
BIO 287	Scientific Writing	1
BIO 309	Genetics	4
BIO 340	Biostatistics	4
BIO 591	Senior Seminar	1
BIO 592	Junior Research	1
	Sub-Total Credits	22

Choose at least one from each of the following three categories:

(1) Advanced core in cellular biology/molecular biology/genetics

Course Code	Title	Hours
BIO 302	Developmental Biology	4
BIO 306	Plant Physiology	3
BIO 320	Advanced Cell Biology	4
BIO 360	Microbiology	4
BIO 365	Advanced Microbiology	4
BIO 430	Molecular Biology	4
BIO 450	Immunology	3
BIO 460	Virology	3
	Sub-Total Credits	3-4

## (2) Advanced core in organismal biology

Course Code	Title	Hours
BIO 302	Developmental Biology	4
BIO 303	Comparative Vertebrate Anatomy	4
BIO 304	Animal Physiology	4
BIO 305	Botany	4
BIO 308	Human Anatomy and Physiology I	4
BIO 315	Michigan Flora	3
BIO 325	Histology	3
BIO 370	Entomology	4
BIO 383	Mammalogy	3
BIO 390	Animal Parasitology	3
BIO 408	Human Anatomy and Physiology II	4
BIO 470	Cognitive Neuroscience	3
	Sub-Total Credits	3-4

## (3) Advanced core in evolution and ecology

Course Code	Title	Hours
BIO 307	Plant Ecology	3
BIO 311	Methods in Field Biology	3
BIO 318	Historical Geology	3
BIO 350	Conservation	3
BIO 364	Freshwater Biology	4
BIO 368	Marine Biology	4
BIO 380	Animal Behavior	4
BIO 405	Population Genetics	3
	Sub-Total Credits	3-4

## Mathematics

Course Code	Title	Hours
	MTH 120 or MTH 112/113	3-4
	Sub-Total Credits	3-4

## Chemistry/Physics/Mathematics

Choose five additional cognate courses from:

Course Code	Title	Hours
CHM 201	General Chemistry I	4
CHM 202	General Chemistry II	4
CHM 303	Organic Chemistry I	4
CHM 304	Organic Chemistry II	4
PHY 101	College Physics I	4
PHY 102	College Physics II	4
PHY 201	University Physics I	4
PHY 202	University Physics II	4
MTH 220	Calculus II	4
MTH 310	Linear Algebra	3
MTH 320	Multivariable Calculus	4
	Sub-Total Credits	20

**Total Credits: 32 + Cognates**

## Research Thesis

Course Code	Title	Hours
BIO 590	Junior Seminar	1
	BIO-593/594	1-3
	Sub-Total Credits	2-4

A senior year comprehensive examination is also required.