

Biology- Bachelor of Science

For information, contact the Department of Biology, 212 Pearson Hall, 513-529-3100.

Biology is a natural science concerned with the study of life and living organisms. The biology major can be tailored to meet the needs of students interested in the health sciences, animal or plant physiology, cell and molecular biology, ecology or environmental studies, or evolution and systematics. It is possible to complete a Biology Major while earning either the Bachelor of Arts or Bachelor of Science.

Students may not double major in Biology and Botany, or in Biology and Zoology.

Program Requirements

(40 semester hours, plus 33 related hours)

Code	Title	Credit Hours
Core Courses		
BIO/MBI 115	Biological Concepts: Ecology, Evolution, Genetics, and Diversity	4
BIO/MBI 116	Biological Concepts: Structure, Function, Cellular, and Molecular Biology	4
Advanced Course Requirements ¹		32
BIO 203	Introduction to Cell Biology	3
BIO 206	Evolutionary Biology	3-4
or BIO 204	Evolution of Plant Biodiversity: Genes to Biosphere	
BIO 209	Fundamentals of Ecology	3
BIO 342	Genetics	3
Laboratory Course Requirement:		
Select at least two advanced courses with a laboratory component ²		
Plant-focused Courses:		
Select at least one of the following:		3-4
BIO 204	Evolution of Plant Biodiversity: Genes to Biosphere	
BIO 205	Dendrology	
BIO 221	Plant Propagation	
BIO 244	Viticulture and Enology	
BIO 302	Plant Taxonomy	
BIO 306	Basic Horticulture	
BIO 314	Plant Diversity	
BIO 402	Plant Anatomy	
BIO 425	Environmental Plant Physiology	
BIO/GEO 431	Global Plant Diversity	
BIO 433	Field Ecology	
BIO 438	Soil Ecology and Sustainable Use	
Animal Focused Courses:		
Select at least one of the following:		3-4
BIO 201	Human Anatomy	
BIO 305	Human Physiology	

BIO 311	Vertebrate Zoology
BIO 312	Invertebrate Zoology
BIO 361	Patterns in Development
BIO 408	Ornithology
BIO 410	Mammalogy
BIO 449	Biology Of Cancer
BIO 453	Animal Physiological Ecology
BIO 454	Endocrinology
BIO 457	Neuroanatomy
BIO 465	Animal Behavior
BIO 469	Neurophysiology

Related Courses **33**

Two years of chemistry are required: 10-11

First Term:

CHM 141 College Chemistry
or CHM 141R College Chemistry
or CHM 141H College Chemistry

and

CHM 144 College Chemistry Laboratory
or CHM 144M College Chemistry Laboratory for Majors

Second Term:

CHM 142 College Chemistry
or CHM 142H College Chemistry
or CHM 142M College Chemistry for Majors

and

CHM 145 College Chemistry Laboratory
or CHM 145M College Chemistry Laboratory

Select one of the following options: 8-10

Option 1:

CHM 241 Organic Chemistry
& CHM 244 and Organic Chemistry Laboratory

CHM 242 Organic Chemistry
& CHM 245 and Organic Chemistry Laboratory

Option 2:

CHM 231 Fundamentals of Organic Chemistry
& CHM 332 and Outlines of Biochemistry
& CHM 332L and Outlines of Biochemistry Lab

One semester of physics: 4-5

PHY 161 Physics for the Life Sciences with
Laboratory I

or PHY 181 General Physics I
& PHY 183 and General Physics Laboratory I

Select one statistics and one calculus course 7-9

Select one microbiology course (200 level or above) 3-4

¹ The remaining 32 semester hours must be fulfilled by taking biology courses at 200 level or above. Advanced microbiology (MBI) courses and IES 275 can count for up to nine semester hours of this requirement. No more than three semester hours of independent study/research/internship may apply to the major. At least one 400 level course (minimum three semester hours) must be taken.

² Three semester hours of independent research can be used in lieu of one of these courses