BIOLOGY (BS IN BIOLOGY)

The Biology Program

The program of the Department of Biology is organized to provide majors with a sound introduction to the principles of biology and to develop an appreciation for the unity, diversity and complexity of living things. The department attempts to provide majors both breadth and depth of training as well as a variety of approaches to the study of life, while allowing flexibility in the development of programs consistent with the interests and needs of individual students. The major requirements below have been designed with these objectives in mind.

Given the increasing intersection of modern biology with other sciences, majors may wish to enhance their training through a minor in other programs. In addition to those programs offering undergraduate majors, minors are also available in Biochemistry, Environment and Sustainability Program, Marine Science, Public Health, CAMS Mathematical Biology and, through the Applied Science program, in Computational Biology.

Graduate Program

The department offers the degrees of Master of Science and Master of Arts. For degree requirements and a description of graduate courses, see the Biology section of the Graduate Arts & Sciences catalog.

Course Requirements

Biology majors are required to take:

Code	Title	Hours
CHEM 103	General Chemistry I	3
CHEM 103L	General Chemistry Lab I	1
CHEM 206	Organic Chemistry I	3
CHEM 206L	Organic Chemistry Lab I	1
MATH 131	Calculus I for Life Sciences	4
or MATH 111	Calculus I	
MATH 132	Calculus II for Life Sciences	4
or MATH 112	Calculus II	
or BIOL 327	Intro to Biostatistics	
Principles of Biology		
BIOL 203	Introduction to Molecules, Cells, Development	3
BIOL 203L	Introduction to Molecules, Cells, Development Laboratory (fulfills MCR)	1
or BIOL 298	Freshman Honors Biology Laboratory I	
BIOL 204	Introduction to Organisms, Ecology, Evolution	3
BIOL 204L	Introduction to Organisms, Ecology, Evolution Laboratory	1
or BIOL 299	Freshman Honors Biology Laboratory II	
Integrative and Comparative Biology Requirement		
Select one of the following courses, with their integrated labs:		4
BIOL 302	Integrative Biology: Animals	
BIOL 304	Integrative Biology: Plants	
BIOL 306	Microbiology	
Molecular/Cellular Biology Requirement		
Select one of the following:		3
BIOL 310	Molecular Cell Biology	
BIOL 420	Genetic Analysis	
BIOL 433	Developmental Biology	
BIOL 442	Molecular Genetics	
Population Processes Biology Requirement		
Select one of the following:		3-4
BIOL 311	Ecology	
BIOL 312	Evolution of Organisms	
BIOL 318	Conservation Biology	
BIOL 410	Animal Behavior	
BIOL 412	Vascular Plant Systematics	
BIOL 417	Population and Community Ecology	
BIOL 426	Aquatic Ecology	
BIOL 427	Wetland Ecosystems	
Advanced Lab Requirement		
Laboratory work in at least one 400 level course. Successful completion of Biology Honors Research (BIOL 495 Honors-BIOL 496 Honors) can satisfy this requirement. BIOL 403 Research in Biology cannot substitute for the laboratory requirement.		1
Advanced Seminar Requirement		
Select one of the following:		3
BIOL 460	Advanced Seminar in Biology (fulfills MWR)	
Course specifically designated as a seminar course		
Additional Credits		
Remaining credits can be completed by any additional 300 or 400 level BIOL courses unless taken pass/fail or specifically noted as not counting toward minimum requirements in the course description. In addition, up to 3 credits of BIOL240 can count towards the major. BIOL 303 Introduction to Biological Research (always taken pass/fail) cannot be applied to the minimum requirements. Up to 3 credits of BIOL 403 Research in Biology can be counted toward the minimum requirements.		15
Total Hours		**53-54**

The biology courses (BIOL 325, BIOL 327, BIOL 422, BIOL 422L) count as biology electives. Biology majors, especially those planning on pursuing advanced degrees, are strongly recommended to take two semesters of physics and two additional semesters of chemistry. Students who received a score of 5 on the Advanced Placement Examination should consult the catalog section on Requirements for Degrees in regards to credit and exemption options.

Additional Information

100 level biology courses and BIOL 201 Freshman Research are not applicable towards the minimum requirements.