

BIOLOGY MAJOR, BA

Campus: NYC, Westchester

This B.A. program prepares students for a career that may involve significant background in the biological sciences (e.g., scientific journalism and certain legal areas environmental and patent law) but does not require the extensive scientific coursework of the BS degree. Students must pass a comprehensive examination given as part of BIO 490 Introduction to Research in the Biological Sciences that assesses the ability to integrate and synthesize basic concepts in biology.

Major Completion Summary

Requirement	Credits
University Core Requirements	44-55
Major Requirements	35
Open Electives	24-49
Total Credits	128

University Core Requirements (44-55 Credits)

See complete University Core (<http://catalog.pace.edu/undergraduate/university-core-curriculum/>) requirements.

Includes as foundational courses the following major-required courses:

Code	Title	Credits
Required Foundational Chemistry and Math Courses		
CHE 111	General Chemistry I	4
Select one of the following:		3-4
MAT 141	Introductory Statistics for the Life Sciences	4

Major Requirements (35 Credits)

Code	Title	Credits
Biology Core Courses		
BIO 101	General Biology I	4
BIO 102	General Biology II	4
BIO 210	Ecology	4
BIO 231	Genetics	4
BIO 327	Cellular Biochemistry	4
BIO 335	Molecular and Cellular Biology	4
BIO 335A	Molecular and Cellular Biology (NYC students only)	1
BIO 490	Introduction to Research in the Biological Sciences	3
BIO 493	Major Field Test in Biology	0
Select one of the following:		3
BIO 395	Independent Study in Biology	
BIO 480	Research in Biology	
BIO 491	Internship in Biology	
Major Electives		
Select nine credits of the following:		9
BIO 205	Concepts of Environmental Science	
BIO 215	Urban Ecology	
BIO 221	Botany	
BIO 233	Fundamentals of Histology and Histopathology	
BIO 236	Comparative Vertebrate Anatomy	
BIO 251	Principles of Human Anatomy	
BIO 264	Microbiology	
BIO 296C	The Neurobiology of Alzheimer's Disease	
BIO 306	Advanced Microbiology	

BIO 305	Evolutionary Biology	
BIO 307	Microbial Ecology	
BIO 322	Animal Behavior	
BIO 334	General Physiology	
BIO 345	Introduction to Toxicology	
BIO 359	Immunology	
BIO 375	Advanced Cell Biology	
BIO 399C	Topic: Cancer Cell Biology	
BIO 399I	Fundamentals in Reproductive Biology	
Major Required Chemistry Courses ²		
CHE 112	General Chemistry II	4
CHE 223	Organic Chemistry I	5
CHE 224	Organic Chemistry II	5
Total Credits		54

² Major-required Chemistry courses may be taken for University Core or Open Elective credit in consultation with academic advisor.

Open Electives (24-49 Credits)

Code	Title	Credits
Open Electives		
Select 24-49 credits ¹		24-49
Total Credits		24-49

¹ Includes major-required Chemistry courses not taken for core credit.

In addition to the courses listed below, students are required to complete two courses with the Anti-Racism Education attribute attached. These courses may be taken during any semester of their education. See advisor for more information.

Course	Title	Credits
First Year		
Fall		
ENG 110	Composition	3
BIO 101	General Biology I	0-4
CHE 111	General Chemistry I	0-4
UNV 101	First-Year Seminar: Introduction to University Community	1
Take any one remaining Area of Knowledge course		3
Credits		7-15
Spring		
BIO 102	General Biology II	0-4
CHE 112	General Chemistry II	0-4
CIS 101	Introduction to Computing	0-3
ENG 120	Critical Writing	4
Credits		4-15
Second Year		
Fall		
BIO 231	Genetics	0-4
CHE 223	Organic Chemistry I	0-5
Take any one remaining Area of Knowledge course		3
Learning Community (LC) course		6
Credits		9-18

Spring

BIO 335 or BIO 335A	Molecular and Cellular Biology (Writing Enhanced (WE) course. In NYC, BIO 335 and BIO 335A are 5 credits; in PLV, BIO 335 is 4 credits) or Molecular and Cellular Biology	4
ENG 201	Writing in the Disciplines	3
CHE 224	Organic Chemistry II	0-5
Take any one remaining Area of Knowledge course		3
Credits		10-15

Third Year**Fall**

BIO 327	Cellular Biochemistry	4
BIO 210	Ecology	0-4
Take any one remaining Area of Knowledge course		3
First Second Language Course. See Advisor for guidelines		3
Open Elective Course		3
Credits		13-17

Spring

BIO 490	Introduction to Research in the Biological Sciences (Writing Enhanced (WE) course)	0-3
MAT 141	Introductory Statistics for the Life Sciences	4
Take any one remaining Area of Knowledge course		3
Open Elective Course		3
Second Language Course, if applicable		3
Credits		13-16

Fourth Year**Fall**

One elective course in BIO		3
BIO 395 or BIO 491 or BIO 493	Independent Study in Biology or Internship in Biology or Major Field Test in Biology	3
COM 200	Public Speaking	3
BIO 493	Major Field Test in Biology	0
Open Elective Course		3
Open Elective Course		3
Credits		15

Spring

One elective course in BIO		3
One elective course in BIO		4
Open Elective Course		3
Open Elective Course		3
Civic Engagement (CE) course		3
Credits		16
Total Credits		87-127