

BIOCHEMISTRY MAJOR (B.S.)

120 credits of coursework is required for the baccalaureate degree with a minimum 2.0 overall GPA, and a minimum 2.0 major GPA.

Program Requirements Overview

Code	Title	Credits
	General Education Requirements	32
	World Languages and Cultures Requirements	3-9
	Major Requirements	72
	Free Electives	13-7
	Total Credits	120

Major Requirements

Code	Title	Credits
Chemistry Courses		
CHEM 120	General Chemistry I	4
CHEM 121	General Chemistry II	4
CHEM 230	Organic Chemistry I	3
CHEM 231	Organic Chemistry II	3
CHEM 232	Experimental Organic Chemistry I	2
CHEM 233	Experimental Organic Chemistry II	2
CHEM 310	Analytical Chemistry	5
CHEM 340	Physical Chemistry I	3
CHEM 347	Biophysical Chemistry	3
CHEM 370	Biochemistry I	3
CHEM 371	Biochemistry II	3
CHEM 372	Experimental Biochemistry I	2
CHEM 373	Experimental Biochemistry II	3
CHEM 495	The Chemical Literature	1
Biology Courses		
BIOL 230	Cell and Molecular Biology	4
BIOL 350	Microbiology	4
BIOL 380	Genetics	4
BIOL 434	Molecular Biology	3
Mathematics Courses		
AMAT 120 or MATH 122	Applied Calculus A Calculus I	4
AMAT 220 or MATH 221	Applied Calculus B Calculus II	4
Physics Courses		
PHYS 191	University Physics I	4
PHYS 192	University Physics II	4
	Total Credits	72

General Education Requirements

Click here for a list of courses that fulfill General Education categories. (<http://catalog.montclair.edu/undergraduate-graduate-degree-requirements/general-ed-ba-bs/>)

Code	Title	Credits
A. New Student Seminar		
	Complete a 1 credit New Student Seminar course.	1
C. Communication		
	1. Writing	3
	2. Literature	3
	3. Communication	3
D. Fine and Performing Arts		
	Complete a 3 credit Fine and Performing Arts course.	3
F. Humanities		
	1. Great Works and Their Influences	3
	2. Philosophical and Religious Perspectives	3
G. Computer Science		
	Complete a 3 credit Computer Science course.	3
H. Mathematics		
	Fulfilled in the major.	
	AMAT 120 Applied Calculus A or MATH 122 Calculus I	
I. Natural Science Laboratory		
	CHEM 120 General Chemistry I (Fulfilled in the major.)	
J. Physical Education		
	Complete a 1 credit Physical Education course.	1
K. Social Science		
	1. American and European History	3
	2. Global Cultural Perspectives	3
	3. Social Science Perspectives	3
L. Interdisciplinary Studies		
	PHYS 191 University Physics I (Fulfilled in the major.)	
	Total Credits	33

World Languages and Cultures Requirements

Click here for a list of courses that fulfill World Languages and Cultures categories. (<http://catalog.montclair.edu/undergraduate-graduate-degree-requirements/world-languages-cultures-requirement/>)

Code	Title	Credits
World Languages		
	Based on language placement exam, complete one or two sequential courses in the same language.	3-6
World Cultures		
	Requirement may be fulfilled by course selected in General Education - Social Science: Global Cultural Perspectives.	0-3
	Total Credits	3-9

Recommended Roadmap to Degree Completion

This recommended four-year plan is provided as an outline for students to follow in order to complete their degree requirements within four years. This plan is a recommendation and students should only use it in consultation with their academic advisor.

2 Biochemistry Major (B.S.)

Course	Title	Credits
First Year		
Fall		
GENERAL EDUCATION: (A) New Student Seminar		1
GENERAL EDUCATION: (C1) Writing		3
	Credits	4
Spring		
GENERAL EDUCATION: (C2) Literature		3
GENERAL EDUCATION: (C3) Communication		3
	Credits	6
	Total	10
	Credits	