BIOCHEMISTRY MAJOR — B.S.

This B.S. degree requires 60 liberal arts credits out of the 120 credits required for graduation.

Summary

Code	Title	Credits
Biochemistry B.S. Major Requirements		67
Integrative Core Curriculum Requirements and Electives [1]		53
Total Credits		**120**

[1] *This major is approved to fulfill the* Integrative Core Curriculum *(*https://catalog.ithaca.edu/undergrad/programsaz/integrative-core-curriculum/*) requirement for the Natural Sciences perspective.*

Degree Requirements

Code	Title	Credits
BIOLOGY		
BIOL 12100	Principles of Biology, Cell and Molecular	4
BIOL 12200	Principles of Biology, Ecology and Evolution	4
BIOL 22700	Genetics	4
CHEMISTRY		
CHEM 12100 & CHEM 12200	Principles of Chemistry and Principles of Chemistry Laboratory	4
or CHEM 12300	Principles of Chemistry - Enriched Section	
CHEM 22100 & CHEM 22300	Organic Chemistry I and Organic Chemistry I Laboratory	4
CHEM 22200 & CHEM 22400	Organic Chemistry II and Organic Chemistry II Laboratory	4
CHEM 23200 & CHEM 23300	Quantitative Chemistry and Quantitative Chemistry Laboratory	4
CHEM 33100	Physical Chemistry: Thermodynamics and Kinetics	3
BIOCHEMISTRY		
BIOC 35300	Biochemistry: Protein Structure & Function	3
BIOC 35400	Biochemistry: Molecular Biology of the Gene	4
BIOC 48100	Current Topics in Biochemistry	3
INQUIRY-BASED LABORATORY ELECTIVE		
BIOC 39000	Independent Research in Biochemistry	3
or BIOC 41000	Experimental Biochemistry	
CELLULAR BIOCHEMISTRY ELECTIVE [1]		
Select one of the following:		4
BIOL 34500	Developmental Biology	
BIOL 35200	Microbiology	
BIOL 35400	Cell Biology	
BIOLOGY OR CHEMISTRY ELECTIVE		
Select at least 3 additional credits of BIOL or CHEM at the 300- or 400-level [1, 2]		3
PHYSICS		
Select one of the following sequences:		8
PHYS 11700 & PHYS 11800	Momentum, Energy, and Heat and Classical Fields: Gravity, Electricity, & Magnetism	
PHYS 10100 & PHYS 10200	Introduction to Physics I and Introduction to Physics II	
MATHEMATICS		
Select one of the following sequences:		8
MATH 10800 & MATH 14500	Applied Calculus and Statistics for the Health, Life, and Social Sciences	
MATH 11100 & MATH 11200	Calculus I and Calculus II	
Total Credits		**67**

[1] *The credits taken to fulfill the Cellular Biochemistry requirement cannot also be used to fulfill the Biology or Chemistry elective requirement.*

[2] *The following seminar and research courses cannot be used to count toward the Biology or Chemistry elective requirement:* BIOL 30000, BIOL 30200, BIOL 40000, BIOL 40200, BIOL 41100, BIOL 41200, BIOC 39000, BIOC 39100, BIOC 39200, BIOC 49100, BIOC 49200, BIOC 49700, BIOC 49800, CHEM 39100, CHEM 39200, CHEM 48600, CHEM 48700, *and* CHEM 48800.