

BIOCHEMISTRY MAJOR

MAJOR OBJECTIVES

In addition to fulfilling the Science-Mathematics Departmental objectives:

- Students majoring in **Biochemistry, Biology, Chemistry and Natural Sciences** are expected to:
 - Formulate questions about nature that are amenable to scientific investigations
 - Utilize current information retrieval technology to effectively search the scientific literature and to be conversant with current developments
 - Apply modern approaches, techniques and instrumentation in designing and conducting experiments
 - Use appropriate software packages for instrumental control and data manipulation

Important Notes

- 40% of major requirements must be completed at Judson.
- At least 18 hours of major requirements must be upper division.

Gen Eds Required by Major

- Any Mathematics course of 3 hours or more (fulfills Gen Ed Mathematics Requirement)
- Any Science course (with Lab) of 4 hours or more (fulfills Gen Ed Science Requirement)
- SCM319 Junior Science Seminar (1 c.h.) (fulfills Gen Ed GEN301 Requirement)

Major Requirements

Code	Title	Hours
Biochemistry		
BCM358	General Biochemistry I w/Lab	4
BCM471	General Biochemistry II w/Lab	4
Chemistry		
CHM153	General Chemistry I w/Lab	4
CHM154	General Chemistry II w/Lab	4
CHM255	Analytical Chemistry w/Lab	5
CHM257	Organic Chemistry I w/Lab	5
CHM258	Organic Chemistry II w/Lab	5
Biology		
BIO171	Principles of Biology w/Lab	4
Select four of the following courses:		16
BIO273	Anatomy and Physiology I w/Lab	
BIO274	Anatomy and Physiology II w/Lab	
BIO371	Microbiology w/Lab	
BIO372	Cell Biology w/Lab	
BIO376	Evolutionary Theory/W Lab	
BIO378	Human Genetics w/Lab	
BIO380	Genetic Analysis w/Lab	
BIO480	Developmental Biology w/Lab	
Physics		
PHY237	General Physics I w/Lab	4
PHY238	General Physics II w/Lab	4

Mathematics		
MAT211	Functions and Calculus I (or Higher)	3-5
or MAT215	Calculus w/Analytic Geometry I	
MAT216	Calculus w/Analytic Geometry II (or approved Math elective)	4
SCM Seminars		
SCM219	Sophomore Science Seminar	1
SCM319	Junior Science Seminar	1
SCM419	Senior Science Seminar	1
Total Hours		69-71

Bachelor of Science in Biochemistry (Four-Year Plan)

Academic planning is the student's responsibility. This Graduation Plan is designed to be a guide to assist students as they plan their course selections. This is only a suggested schedule, and is not a substitute for a student's Degree Audit, nor the Program Requirements in the Judson University Catalog. Actual course selections should be made with the advice and approval of an academic advisor. Students should become familiar with the catalog in effect at the time at which they entered the institution. Course requirements and sequencing may vary with AP courses, transfer courses, English/math placement, or other conditions.

A full-time course load for undergraduate students is 12-18 credits per semester. Illinois residents receiving state aid should register for 15 hours per semester.

Course	Title	Hours
First Year		
First Semester		
MAT211	Functions and Calculus I	3-5
or MAT215	or Calculus w/Analytic Geometry I	
GEN101	Questions of Life: Entering the Judson Conversation ¹	1
or ESS101	or Wellness	
CHM153	General Chemistry I w/Lab	4
BIO171	Principles of Biology w/Lab	4
Hours		12-14
Second Semester		
ENG101	Expository Writing (or ACT/SAT placement)	3
MAT216	Calculus w/Analytic Geometry II	4
CHM154	General Chemistry II w/Lab	4
BIO172	Prin of Organismal Biology w/Lab	4
Hours		15
Second Year		
First Semester		
ENG102	Critical Thinking and Writing (or ACT/SAT placement)	3
PSY111	Introduction to Psychology	3
or SOC151	or Introduction to Sociology	
CHM257	Organic Chemistry I w/Lab	5
SCM219	Sophomore Science Seminar	1
Biology Elective 1 ²		4
Hours		16
Second Semester		
BST110	Intro to the Christian Bible	3
SPC120	Foundations of Speech	3
CHM258	Organic Chemistry II w/Lab	5
Biology Elective 2 ²		4
Hours		15

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Third Year

First Semester

HIS261 or HIS262	History of Civilization I or History of Civilization II	3
Physical Activity course		1
PHY237	General Physics I w/Lab	4
BCM358	General Biochemistry I w/Lab	4
Any Elective		3
Hours		15

Second Semester

BCM471	General Biochemistry II w/Lab	4
SCM319	Junior Science Seminar ³	1
PHY238	General Physics II w/Lab	4
CHM255	Analytical Chemistry w/Lab	5
Any Elective		3
Hours		17

Fourth Year

First Semester

THS110	Christian Faith: Understanding and Application	3
GEN401	The Good Life: Continuing the Conversation	3
SCM419	Senior Science Seminar	1
Biology Elective 3 ²		4
Any Elective		3
Hours		14

Second Semester

Gen Ed Visual and Performing Arts Elective		3
Gen Ed Biblical Studies Elective		3
MAT311	Probability and Statistics w/Lab	4
Biology Elective 4 ²		4
Any Elective		3
Hours		17
Total Hours		121-123

¹ First-time students (those entering college directly from high school) should take GEN101; transfer students should take ESS101

² see major audit

³ GEN301 equivalent