

# Biochemistry Major (BCH)

Biochemistry is an interdisciplinary major appropriate for students who plan to go to health professional programs (such as medical, dental, veterinary, or pharmacy school) or to graduate studies in Biochemistry.

Current students and graduates will

- demonstrate a core of knowledge in inorganic, organic, biological, analytical, and physical chemistry
- demonstrate basic laboratory skills and the ability to select and utilize appropriate instrumentation to conduct scientific investigations and analyses
- communicate competently, in the form of an oral presentation, the results of literature research and laboratory experimentation.
- understand the major concepts and developments at the interface of chemistry and biology
- demonstrate laboratory skills and the ability to utilize and select instrumentation specific to biochemical investigations

Degree Type: Bachelor of Science (BS)

Program Contact: Assistant Professor Amanda Hughes

**No minor required.**

**Department:** Biochemistry

**Type:** B.S.

Core Courses	39 hours
Required Course Selections	7-8 hours
Group 1	
Group 2	
Group 3	
Electives	
Allied Courses	10 hours
Note:	
Total	60

## Core Courses

Item #	Title	Credit Hour(s)
CHE111	General Chemistry I	3
CHE111L	General Chemistry I Laboratory	1
CHE112	General Chemistry II	3
CHE113	General Chemistry II Lab	1
CHE201	Organic Chemistry I	3
CHE202	Organic Chemistry Lab I - Techniques and Synthesis	1
CHE309	Organic Chemistry II	3
CHE310	Organic Chemistry Lab II - Qualitative Analysis and Synthesis	1
CHE331	Physical Chemistry I	4
CHE341	Biochemistry	3
CHE342	Biochemistry Lab	1
CHE343	Lipid Biochemistry	1
CHE450	Junior Seminar	1
CHE451	Senior Seminar	1
BIO111	Biological Principles	4
BIO212	Cellular and Molecular Biology	4
BIO335	Genetics and Molecular Biology	4

## Required Course Selections

### Group 1

Select two courses from the following:

Item #	Title	Credit Hour(s)
CHE305	Analytical Chemistry	4
CHE315	Spectroscopy	4
CHE332	Physical Chemistry II	3
CHE400	Advanced Inorganic Chemistry	3

### Group 2

Select an additional course from Group 1 or one course from the following:

Item #	Title	Credit Hour(s)
CHE317	Forensic Chemistry	3
CHE320	Nuclear Chemistry	3
CHE327	Medicinal Chemistry	3
CHE337	Environmental Chemistry	3

## Group 3

Select one course from the following:

Item #	Title	Credit Hour(s)
BIO305	Human Physiology I	3
BIO311	General Microbiology	4
BIO325	Vertebrate Anatomy and Embryology	4
BIO337	Cell Biology	4

## Electives

Select one upper level CHE lab if needed to reach 34 CHE hours.

## Allied Courses

Item #	Title	Credit Hour(s)
MAT125	Calculus I	3
MAT225	Calculus II	3
PHY211	College Physics I	4

## Note:

*Biochemistry majors wishing to complete the Pre-Pharmacy 3-4 Program should note that all requirements for the major will be met upon finishing the pre-pharmacy coursework completed at Georgetown. Pre-Pharmacy students may take BIO311 General Microbiology in place of BIO337 Cell Biology, and BIO305/305L Human Physiology I (including lab) in place of BIO325 Genetics and Molecular Biology. Also, CHE327 Medicinal Chemistry may satisfy an upper level CHE course requirement.*

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**Total credits:**

**60**

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