

# Biomedical Sciences Major (BMS)

The Biomedical Sciences major is an interdisciplinary program designed for students specifically wishing to pursue a career in the health sciences. The curriculum provides students with the foundation required for admission to and success in a variety of graduate programs (physiology, neuroscience, immunology, human genetics, etc.) or professional schools (medicine, dentistry, veterinary medicine, physical therapy, nursing, etc.). After completing a common core of classes, students specialize in a specific area of interest through upper-level courses in biology and/or chemistry.

Upon completion of this program, students will demonstrate:

- an understanding of the place biomedical science holds in society and preparedness to successfully pursue a career path;
- an understanding of the scientific method, including construction of hypotheses, data collection and analysis, and the formulation of conclusions;
- an understanding of the basic concepts of biomedical science, including biological molecules, the cell as a functioning structure, mechanisms of inheritance, and an understanding of general, organic, and biochemistry;
- an ability to understand and critique primary scientific literature and communicate effectively to peers in written and verbal form.

Degree Type: Bachelor of Science (BS)

Program Contact: Professor Tracy Livingston

**No minor required.**

**Department:** Biomedical Sciences

**Type:** B.S.

Core Courses	45 hours
Required Course Selections	4 hours
	1 hours
	3 hours
Elective Courses	11 hours
<b>Total</b>	<b>60</b>

## Core Courses

Item #	Title	Credit Hour(s)
BIO111	Biological Principles	4
BIO212	Cellular and Molecular Biology	4
BIO214	Organismal Diversity	4
BIO305	Human Physiology I	3
BIO305L	Human Physiology I Lab: Electrophysiology	1
BIO335	Genetics and Molecular Biology	4
BIO402	Seminar I	2
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
CHE341	Biochemistry	3
PHY211	College Physics I	4

## Required Course Selections

### Group 1

Select one of the following:

Item #	Title	Credit Hour(s)
CHE342	Biochemistry Lab	1
CHE343	Lipid Biochemistry	1

### Group 2

Select one of the following:

Item #	Title	Credit Hour(s)
MAT111	Elementary Probability and Statistics	3
MAT125	Calculus I	3
CSC303	Fundamentals of Data Computing	3

## Elective Courses

Select eleven additional credit hours among 300–400 level courses in [Biology](#) or [Chemistry](#).

**Total credits:**

**60**