

Biochemistry Major

Bachelor of Science, BS

The Bachelor of Science degree with a major in biochemistry is based upon the recommendations of the American Society for Biochemistry and Molecular Biology. The degree requires 36 credit hours of chemistry, 15-16 credit hours of biology, and 15 credit hours of cognate coursework. Specific course requirements are outlined below.

To earn a major in biochemistry, a student must have a minimum GPA of 2.0 in all required chemistry and biology coursework. Grades in cognate courses are not included in the GPA calculation. Elective credits beyond the required number may not be included in the calculation. To receive the Bachelor of Science degree in Biochemistry, students must receive a grade of C- or higher in every chemistry and biology course required for the major, excluding cognate coursework.

Student Learning Outcomes for the Biochemistry Program

Through completion of the Bachelor's Degree in Biochemistry, our graduates will:

1. acquire an understanding of fundamental biochemical principles and integrate these principles from major areas of chemistry (analytical, inorganic, organic and physical) and biology (cellular, organismal, molecular and genetics)
2. develop laboratory skills in biochemistry
3. engage in the scientific process through participation in faculty-sponsored research projects
4. enhance oral and written communication skills appropriate for biochemists

* Students are not permitted to double major in Biochemistry with either Biology or Chemistry. Statistics, computer science, and additional math courses are recommended for majors in chemistry and biochemistry, but are not required.

Chemistry Courses

* A research experience must also be completed, either with Converse faculty or in a pre-approved external summer setting. Research performed on campus may be completed in either the biology or chemistry department.

Item #	Title	Credits
CHM 190	GENERAL CHEMISTRY	4
CHM 203	ORGANIC CHEMISTRY I	4
CHM 204	ORGANIC CHEMISTRY II	4
CHM 251	QUANTITATIVE ANALYSIS	4
CHM 307	JUNIOR SEMINAR	2
CHM 310	INORGANIC CHEMISTRY	4
CHM 315	PHYSICAL CHEMISTRY I	4
CHM 407	SENIOR SEMINAR	2
CHM 415	BIOCHEMISTRY I	4
CHM 416	BIOCHEMISTRY II	4
Sub-Total Credits		36

Required Biology Courses

Item #	Title	Credits
BIO 190	INTRODUCTION TO BIOLOGICAL SCIENCE I	4
BIO 191	INTRODUCTION TO BIOLOGICAL SCIENCE II	4
Sub-Total Credits		8

Biology Selection

Choose two of the following five courses:

Item #	Title	Credits
BIO 301	GENETICS	4
BIO 310	CELL BIOLOGY	4
BIO 312	MICROBIOLOGY	4
BIO 408	MOLECULAR BIOLOGY OF THE CELL	4
BIO 409	BIOLOGY OF CANCER	3
Sub-Total Credits		7-8

Math Cognate Requirements

Item #	Title	Credits
MTH 120	CALCULUS AND ANALYTIC GEOMETRY I	4
MTH 210	CALCULUS AND ANALYTIC GEOMETRY II	3
Sub-Total Credits		7

Physics Cognate Requirements

Complete one of the following Physics series:

Item #	Title	Credits
	PHY 251 and PHY 252 Essentials of Physics I and II	8
	PHY 241 and PHY 242 Elements of Physics I and II	8
Sub-Total Credits		8
Total Credits		67