

# BIOCHEMISTRY, B.S.CHM.

## Program Overview and Description:

The Bachelor of Science in Chemistry – Biochemistry track is certified by the **American Chemical Society** which requires a commitment to institutional and professional excellence. This track has a strong focus on undergraduate research and combines foundational courses in chemistry, biology, mathematics and physics with advanced chemistry and biochemistry electives that emphasize the study and analysis of biological molecules and their systems. Students who graduate with this professional degree will be especially prepared for a graduate education in biochemistry and medicine, and for careers in biochemistry and related disciplines.

## Prerequisite Courses:

(These courses are prerequisites to required upper-level chemistry courses)

Code	Title	Credits
<b>Requisite Courses</b>		
MTH 245	Calculus I	4
MTH 246	Calculus II <sup>1</sup>	4
or MTH 249	Modeling the Physical World I	
PHY 201	General Physics for the Life Sciences <sup>1</sup>	3
or PHY 213	General Physics for the Physical Sciences I	
or PHY 221	Advanced General Physics I:Modeling the Physical World	
PHY 202	General Physics for the Life Sciences II <sup>2</sup>	3
or PHY 214	General Physics for the Physical Sciences II	
or PHY 222	Advanced General Physics II:Modeling the Physical World	
PHY 205	General Physics Laboratory I	1
or PHY 223	Project Physics Laboratory I	
PHY 206	General Physics Laboratory II	1
or PHY 224	Project Physics Laboratory II	
BIO 201	General Biology: Organismal and Population	3
BIO 205	General Biology: Organismal and Population Laboratory	1
BIO 202	General Biology: Cellular and Molecular	3
BIO 206	General Biology: Cellular and Molecular Laboratory	1

<sup>1</sup> Prerequisite for CHM 341.

<sup>2</sup> Prerequisite or co-requisite for CHM 341.

## B.S.Chm., Biochemistry Track Requirements: 43 Credits

Code	Title	Credits
CHM 315	Quantitative and Statistical Analysis <sup>1</sup>	4
CHM 321	Organic Chemistry I	3
CHM 322	Organic Chemistry I Laboratory	1
CHM 323	Organic Chemistry II	3
CHM 324	Organic Chemistry II Laboratory	1
CHM 341	Physical Chemistry I	3
CHM 342	Physical Chemistry Laboratory	2
CHM 343	Physical Chemistry II	3

CHM 382	Biochemistry Laboratory	2
CHM 383	Biochemistry I	3
CHM 384	Biochemistry II	3
CHM 451	Inorganic Chemistry I	3
CHM 456	Instrumental Analysis	3
CHM 466	Instrumental Analysis Laboratory	2
CHM 497	Directed Independent Research II	1
CHM 496	Directed Independent Research I	2
or CHM 498	Directed Independent Research - Special	
CHM 499	Chemistry Seminar	1

**Select one of the following:** **3**

CHM 392	Forensic Chemistry	
CHM 521	Advanced Organic Chemistry: Synthetic Organic Methods	
CHM 523	Bioorganic Chemistry	
CHM 525	Organic Spectroscopic Analysis	
CHM 575	Nucleic Acid Biochemistry	
CHM 576	Protein Biochemistry	

Total Credits 43

<sup>1</sup> Waived for students who have completed CHM 285 Advanced General Chemistry II and CHM 286 Chemical and Statistical Analysis Laboratory.