

# CHEMISTRY, B.S.CHM.

## Program Overview and Description:

The Bachelor of Science in Chemistry – Chemistry 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, mathematics and physics with advanced electives intended to expose students to a broad array of chemical and physical theories and applied systems. Students who graduate with this professional degree will be especially prepared for graduate studies in chemistry, and for careers in chemistry, medicine, 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	

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

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

## B.S.Chm., Chemistry Track Requirements: 38 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 371	Biochemistry of Metabolism	3
or CHM 383	Biochemistry I	
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
<b>Select two additional courses:</b>		<b>3</b>

One of the courses must be a lecture-based course:

CHM 351	Descriptive Inorganic Chemistry
CHM 384	Biochemistry II
CHM 421	Selected Topics In Organic Chemistry
CHM 445	Chemical Thermodynamics
CHM 446	Statistical Mechanics
CHM 448	Group Theory
CHM 502	Inorganic Chemistry II
CHM 521	Advanced Organic Chemistry: Synthetic Organic Methods
CHM 523	Bioorganic Chemistry
CHM 525	Organic Spectroscopic Analysis
CHM 527	Polymer Chemistry
CHM 543	Selected Topics In Physical Chemistry
CHM 544	Quantum Chemistry
CHM 545	Advanced Kinetics
CHM 556	Electrochemical Methods
CHM 575	Nucleic Acid Biochemistry
CHM 576	Protein Biochemistry

The second course must be a laboratory-based biochemistry or inorganic chemistry course:

CHM 392	Forensic Chemistry
CHM 382	Biochemistry Laboratory
CHM 528	Polymer Chemistry Laboratory

Total Credits 38

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