CHEMISTRY, B.S.

Program Overview and Description:

The Bachelor of Science – major in Chemistry combines foundational courses in chemistry, mathematics and physics with advanced electives in order to expose students to a broad array of chemical theory and systems. Students who graduate with this degree will be well-prepared for careers in chemistry, and for further study in chemistry, medicine, education, pharmacy, patent-law, journalism, and other professional programs that require, or could benefit from, a strong background in science.

Prerequisite Courses:

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

Code	Title	Credits
Requisite Courses		
MTH 245	Calculus I	4
MTH 246	Calculus II [1]	4
or MTH 249	Modeling the Physical World I	
PHY 201	General Physics for the Life Sciences [1]	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 [2]	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	

[1] Prerequisite for CHM 341.
[2] Prerequisite or co-requisite for CHM 341.

B.S., Major in Chemistry Requirements: 31 Credits

Code	Title	Credits
CHM 315	Quantitative and Statistical Analysis [1]	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 456	Instrumental Analysis	3
CHM 466	Instrumental Analysis Laboratory	2
CHM 499	Chemistry Seminar	1
Select three credit hours from the following list:		**3**
CHM 371	Biochemistry of Metabolism	
CHM 383	Biochemistry I	
CHM 421	Selected Topics In Organic Chemistry	
CHM 445	Chemical Thermodynamics	
CHM 446	Statistical Mechanics	
CHM 448	Group Theory	
CHM 451	Inorganic Chemistry I	
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	
Select two credit hours from the following list:		**2**
CHM 351	Descriptive Inorganic Chemistry	
CHM 382	Biochemistry Laboratory	
CHM 392	Forensic Chemistry	
CHM 496 & CHM 497	Directed Independent Research I and Directed Independent Research II	
CHM 515	Green and Sustainable Chemistry Laboratory	
CHM 528	Polymer Chemistry Laboratory	
CHM 548	Chemical Applications of Spectroscopy	
CHM 549	Computational Chemistry	
Total Credits		**31**

[1] Waived for students who have completed CHM 285 Advanced General Chemistry II and CHM 286 Chemical and Statistical Analysis Laboratory.