

Bachelor of Science in Chemistry and a Concentration in Biochemistry	
MAJOR REQUIREMENTS/CHEMISTRY: 24 Credits	Credits
CE-111: General Chemistry I	3.0
CE-111L: General Chemistry I Lab	1.0
CE-112: General Chemistry II	3.0
CE-112L: General Chemistry II Lab	1.0
CE-241: Organic Chemistry I	3.0
CE-241L: Organic Chemistry I Lab	2.0
CE-242: Organic Chemistry II	3.0
CE-242L: Organic Chemistry II Lab	2.0
CE-311: Chemical Literature	1.0
CE-342: Physical Chemistry II	3.0
CE-342L: Physical Chemistry II Lab	1.0
CE-410: Seminar	1.0
CONCENTRATION REQUIREMENTS/BIOCHEMISTRY: 17 Credits	Credits
CE-225: Bioanalytical Chemistry	3.0
CE-225L: Bioanalytical Chemistry Lab	1.0
CE-331: Biochemistry I	3.0
CE-331L: Biochemistry I Lab	1.0
CE-332: Biochemistry II	3.0
Take 6 Credits from the Following Courses:	6.0
CE-452: Advanced Organic Chemistry or CE-498: Medicinal Chemistry	
CE-401: Advanced Inorganic Chemistry	
CE-475: Computational Chemistry and Molecular Modeling	
MA-151: Statistics with Applications	
CE-350: Research in Chemistry (3 credits maximum)	
INTERDISCIPLINARY REQUIREMENTS: 25 Credits	Credits
BY-110: Introduction Cell Molecular Biology	4.0
MA-125: Calculus with Analytic Geometry 1	4.0
MA-126: Calculus with Analytic Geometry II	4.0
PH-211: General Physics with Calculus 1	4.0
PH-211L: General Physics with Calculus I Lab	1.0
PH-212: General Physics with Calculus II	4.0
PH-212L: General Physics with Calculus II Lab	1.0
Take 3 Credits from the Following Courses:	3.0
BY-216: Introduction to Genetics	
BY-223: General Microbiology	
BY-370: Cellular Biology	
BY-410: Molecular Biology	
FREE ELECTIVES: 26 Credits	Credits
	26.0
<p><i>*By appropriate choice of required and free electives, students in this Concentration can meet the requirements for American Chemical Society Certification. It would be necessary to take CE-401, Advanced Inorganic Chemistry and Lab (CE-401L), and two (2) courses from the following list: CE-322, Instrumental Analysis, CE-325, NMR Spectroscopy, CE-341, Physical Chemistry I, CE-405, Inorganic Methods, CE-452, Advanced Organic Chemistry, CE-475, Computational and Molecular Modeling or CE-498, Medicinal Chemistry, and an additional four (4) credits of laboratory courses, which may include CE-350, Research in Chemistry. This should be discussed with your advisor or the department chair.</i></p>	
<p><i>*Students who major in this concentration cannot also major in the Advanced Chemistry Concentration.</i></p>	

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GENERAL EDUCATION REQUIREMENTS: 36 Credits		Credits
First Year Seminar	FY-101: First Year Seminar *(Select Section "CE")	3.0
Reading and Writing	EN-101: College Composition I	3.0
	EN-102: College Composition II	3.0
Mathematics	Fulfilled in Interdisciplinary Requirements with MA-125 or MA-126	0.0
Natural Sciences	Fulfilled in Major Requirements with required CE and BY courses	0.0
Literature	3 Credits from courses designated with Course*Type: LIT	3.0
Aesthetics and Creativity	3 Credits from Art, Music, Theatre, or Dance	3.0
Technological Literacy	IT-102: Information Technology for Scientists	3.0
Reasoned Oral Discourse	Fulfilled in Major Requirements with CE-410	0.0
Historical Perspective	3 Credits from courses designated with Course*Type: HS.SV	3.0
Social Science	3 Credits from courses designated with Course*Type: SS.SV	3.0
Historical Perspective/Social Sciences	3 Credits from courses designated with Course*Type: HS.SV or 3 Credits from courses designated with Course*Type: SS.SV	3.0
Interdisciplinary Perspectives	3 Credits from courses designated with Course*Type: ISP	3.0
Cultural Diversity and Global Understanding or Foreign Language	3 Credits from courses designated with Course*Type: CD and 3 Credits from courses designated with Course*Type: GU or 6 Credits from the SAME foreign language	6.0
Experiential Education	One course designated with Course*Type: EX	0.0
Writing Intensive	Two courses from Chemistry (CE) designated with Course*Type: WT	0.0 0.0

Minimum Credits for Bachelor of Science in Chemistry and a Concentration in Biochemistry = 128.0

NOTES:

* 58 credits must be completed at the 200 level or higher.