MONMOUTH UNIVERSITY CURRICULUM CHART

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: Biolchemistry I Lab	1.0
CE-332: Biochemistry II	3.0
Take 6 Credits from the Following Courses:	6.0
CE-453: Advanced Organic Chemistry	
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-223: General Microbiology	
BY-370: Cellular Biology	
BY-410: Molecular Biology	
BY-423: Genetics	

FREE ELECTIVES: 26 Credits	Credits
_____	26.0
_____	
_____	
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**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 Advanced Inorganic Chemistry and Lab (CE-401, CE-401L), Physical Chemistry I and Lab (CE-341, CE-341L) and/or Computational Chemistry and Molecular Modeling (CE-475). Additional laboratory credits would also be required as Research in Chemistry (CE-350). The Department Chair should be consulted for details.*

**Students who major in this concentration cannot also major in the Advanced Chemistry Concentration.*

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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	3.0
	or	3 Credits from courses designated with Course*Type: SS.SV	
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	6.0
	and	3 Credits from courses designated with Course*Type: GU	
	or	6 Credits from the SAME foreign language	
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.**