MONMOUTH UNIVERSITY CURRICULUM CHART

Bachelor of Science in Chemistry and a Concentration in Biochemistry

MAJOR REQUIREMENTS/CHEMISTRY: 32 Credits			Credits
		CE111: General Chemistry I	3.0
		CE111L: General Chemistry I Lab	1.0
		CE112: General Chemistry II	3.0
		CE112L: General Chemistry II Lab	1.0
		CE221: Quantitative Analysis	2.0
		CE221L: Quantitative Analysis Lab	2.0
		CE241: Organic Chemistry I	3.0
		CE241L: Organic Chemistry I Lab	2.0
		CE242: Organic Chemistry II	3.0
		CE242L: Organic Chemistry II Lab	2.0
		CE311: Chemical Literature	1.0
		CE322: Instrumental Analysis	3.0
		CE322L: Instrumental Analysis Lab	1.0
		CE372: Phys. Chem: Intro. to Spectroscopy & Quantum Chemistry	3.0
		CE372L: Phys. Chem: Intro. to Spectroscopy & Quantum Chemistry Lab	1.0
		CE410: Seminar	1.0

CONCENTRATION REQUIREMENTS/BIOCHEMISTRY: 22 Credits			Credits
		CE310: Biochemistry & Lab	4.0
		CE371: Biophysical Chemistry: Thermodynamics, Dynamics, & Chemical Kinetics	3.0
		CE371L: Biophysical Chemistry: Thermodynamics, Dynamics, & Chemical Kinetics Lab	1.0
		CE452: Advanced Organic Chemistry	3.0
		BY110: Introduction to Cell and Molecular Biology	4.0
		BY410: Molecular Biology	3.0
Take one of the following courses:		BY223: General Microbiology	
	or	BY423: Genetics	4.0

REQUIREMENTS OUTSIDE MAJOR: 18 Credits		Credits
	MA125: Calculus with Analytic Geometry I	4.0
	MA126: Calculus with Analytic Geometry II	4.0
	PH211: General Physics and Calculus I	4.0
	PH211L: General Physics with Calculus I Lab	1.0
	PH212: General Physics with Calculus II	4.0
	PH212L: General Physics with Calculus II Lab	1.0

FREE ELECTIVES: 20 Credits	Credits
_____	20.0

**By careful choice of electives, the BS in Chemistry and a Concentration in Biochemistry can meet the requirements for American Chemical Society Certification. Students wishing to graduate with an ACS certified degree must take CE401 and CE401L, and apply to the Department Chair. See the curriculum chart for BS in Chem. & Concentration in Adv. Chem. option.*

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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	EN101: College Composition I	3.0
	EN102: College Composition II	3.0
Mathematics	Fulfilled in Outside Major Requirements with MA125 or MA126	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	IT102: Information Technology for Scientists	3.0
Reasoned Oral Discourse	Fulfilled in Major Requirements with CE410	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 Froeign 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.**