

B.S. IN CHEMISTRY (CE.BS)

Code	Title	Credits
Major Requirements/Chemistry (36 credits) ¹		
CE-111	General Chemistry I	3
CE-111L	General Chemistry Laboratory I	1
CE-112	General Chemistry II	3
CE-112L	General Chemistry Laboratory II	1
CE-221	Analytical Chemistry I Quantitative Analysis	3
CE-221L	Analytical Chemistry I Laboratory Quantitative Analysis	1
CE-241	Organic Chemistry I	3
CE-241L	Organic Chemistry Laboratory I	2
CE-242	Organic Chemistry II	3
CE-242L	Organic Chemistry Laboratory II	2
CE-311	Chemical Literature	1
CE-322	Analytical Chemistry II Instrumental Analysis	3
CE-322L	Analytical Chemistry II Laboratory Instrumental Analysis	2
CE-341	Physical Chemistry I	3
CE-341L	Physical Chemistry I Laboratory	1
<i>(Chemistry courses satisfy Natural Science (NS) in General Education)</i>		
CE-410	Seminar	1
<i>(Satisfies Reasoned Oral Discourse (RD) in General Education)</i>		
CE-300+	Elective: Select one course from the following list.	3
CE-331	Biochemistry I	
CE-325	NMR Spectroscopy	
CE-401	Advanced Inorganic Chemistry	
CE-452	Advanced Organic Chemistry	
CE-475	Computational Chemistry and Molecular Modeling	
CE-486	Medicinal Chemistry	
Interdisciplinary Requirements (18 credits)		
MA-125	Calculus with Analytic Geometry I	4
MA-126	Calculus with Analytic Geometry II	4
<i>(MA-125 or MA-126 satisfy Mathematics in General Education)</i>		
PH-211	General Physics with Calculus I	4
PH-211L	General Physics with Calculus Laboratory I	1
PH-212	General Physics with Calculus II	4
PH-212L	General Physics with Calculus Laboratory II	1
Free Electives (33 credits) ²		
Select up to 33 credits of free electives ²		33
General Education Requirements (33 credits) ³		
Complete 33 credits as outlined on the General Education table. ³		33
Total Credits		120

1

Students desiring certification by the ACS should enroll in the CE.ACS program and should consult with the department chair and academic advisor.

2

CE-350, Research in Chemistry, is highly recommended and may be taken as free electives. Please consult with your advisor regarding the required number of free electives that must be completed.

3

The General Education curriculum requires the completion of 45 credits. However, students may be able to share credits from within their major or interdisciplinary requirements. Please consult with your advisor to determine which General Education (<http://catalog.monmouth.edu/undergraduate-catalog/academic-programs-support-services-regulations/general-education-requirements/>) courses must be completed.

Notes

- 54 credits must be completed at the 200 level or higher.

B.S. in Chemistry Sequence Chart

First Year			
Fall	Credits	Spring	Credits
CE-111 General Chemistry I		3 CE-112 General Chemistry II	3
CE-111L General Chemistry Laboratory I	1	CE-112L General Chemistry Laboratory II	1
EN-101 College Composition I	3	EN-102 College Composition II	3
IT-102 Information Technology for Scientists	3	MA-126 Calculus with Analytic Geometry II	4
MA-125 Calculus with Analytic Geometry I	4	Gen*Ed Social Science	3
Semester Credits		14 Semester Credits	14
Second Year			
Fall	Credits	Spring	Credits
CE-241 Organic Chemistry I		3 CE-242 Organic Chemistry II	3
CE-241L Organic Chemistry Laboratory I	2	CE-242L Organic Chemistry Laboratory II	2
PH-211 General Physics with Calculus I	4	CE-221 Analytical Chemistry I Quantitative Analysis	3
PH-211L General Physics with Calculus Laboratory I	1	CE-221L Analytical Chemistry I Laboratory Quantitative Analysis	1
Gen*Ed Historical Perspectives	3	PH-212 General Physics with Calculus II	4
free electives	3	PH-212L General Physics with Calculus Laboratory II	1
Semester Credits		16 Semester Credits	14
Third Year			
Fall	Credits	Spring	Credits
CE-311 Chemical Literature		1 CE-410 Seminar	1
CE-341 Physical Chemistry I	3	Gen*Ed Cultural Diversity or Global Understanding	3
CE-341L Physical Chemistry I Laboratory	1	Gen*Ed Literature	3
Gen*Ed Historical or Social Science Persp.	3	CE300+ Chemistry Elective or Free Elective	3
Gen*Ed Aesthetics & Creativity	3	Free Electives	6
Free Electives	6		
Semester Credits		17 Semester Credits	16
Fourth Year			
Fall	Credits	Spring	Credits
CE-322 Analytical Chemistry II Instrumental Analysis		3 CE300+ Chemistry Elective (if not already taken)	3

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CE-322L Analytical Chemistry II Laboratory Instrumental Analysis	2 Gen*Ed Interdisc. Perspect.	3
CE-300+ Elective (See Curriculum Chart for list of options)	3 Free Electives	9
Gen*Ed World Language	3	
Free Electives	3	
Semester Credits	14 Semester Credits	15
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Total Credits 120		