

John Carroll University Chemistry & Biochemistry Department

B.S. Chemistry with ACS certification Study Plan

First Year

Fall Semester	Credits	Major	Core	Minor/Other	Spring Semester	Credits	Major	Core	Minor/Other
CH1410 General Chemistry *I	4	X			CH1420 General Chemistry II*	4	X		
CH1430 General Chemistry Lab I*	1	X			CH1440 General Chemistry Lab II*	1	X		
MT1350 Calculus / Analytic Geometry I	4	X			MT1360 Calculus / Analytic Geometry II	4	X		
EN1250 Seminar on Academic Writing*	3		X		COM1251 Speech Communications	3		X	
TRS 1XX or 2XX Course	3		X		Philosophy Values/Society (PLVS)	3		X	
Total Credit Hours	15				Total Credit Hours	15			

Second Year

Fall Semester	Credits	Major	Core	Minor/Other	Spring Semester	Credits	Major	Core	Minor/Other
CH2210 Organic Chemistry I	3	X			CH2220 Organic Chemistry II	3	X		
CH2230 Organic Chemistry Lab I	1	X			CH2240 Organic Chemistry Lab II	1	X		
PH1250 General Physics I	3	X			CH2610 Analytical Chemistry	3	X		
PH1251 General Physics Lab I	1	X			CH2630 Analytical Chemistry Lab (QA)	1	X	X	
Engaging the Global Community (EGC)	3		X		PH1260 General Physics II	3	X		
Language Requirement	3		X		PH1261 General Physics Lab II	1	X		
Creative and Performing Arts (CAPA)	1-3		X		Language Requirement	3		X	
Total Credit Hours	15				Total Credit Hours	15			

Third Year

Fall Semester	Credits	Major	Core	Minor/Other	Spring Semester	Credits	Major	Core	Minor/Other
CH3630 Physical Chemistry I	3	X			CH3660 Physical Chemistry II	3	X		
CH3670 Physical Chemistry I Lab	2	X			CH3992 Undergraduate Research	1	X		
CH3991 Undergraduate Research	1	X			CH4780 Chemistry Seminar	0	X		
Philosophy Knowledge/Reality (PLKR)	3		X		Career or Program Electives	6	X	X	
TRS 3XX Course	3		X		Linked Pair of Courses	6		X	
Issue in Social Justice Course (ISJ)	3		X		CH4310 General Biochemistry	4	X		
Total Credit Hours	15				Total Credit Hours	17			

Fourth Year

Fall Semester	Credits	Major	Core	Minor/Other	Spring Semester	Credits	Major	Core	Minor/Other
CH4410 Instrumental Analysis	3	X			Career or Program Electives	9	X		
CH4430 Instrumental Analysis Lab**	2	X			CH Elective	3	X		
CH3993 Undergraduate Research	1	X			CH4810 Inorganic Chemistry	3	X		
Humanities Course	3		X		CH4820 Inorganic Chemistry Lab	1	X		
Social Sciences Course	3		X						
CH Elective or Career Elective	3	X	X						
Total Credit Hours	15				Total Credit Hours	16			

If you are planning to attend graduate school, take the GRE in summer after 3rd year and begin submitting applications this fall.

Total CH Credit Hours Required: 42 Total Credit Hours Required to Graduate: 120

Notes:

*Well prepared students may substitute the CH1410/1430 sequence with CH1510/1530 - Chemical Principles and Lab in the Fall Semester.

**CH4430 will satisfy the Core Requirements for Capstone, Advanced Writing and Oral Presentation within the major (CAP, AW, OP)

*Please consult your academic advisor to address specific needs of your major, minor, and/or concentration.