

John Carroll University Chemistry and Biochemistry Department

Biochemistry Concentration 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	
BL1500 Principles of Biology I	3	X			BL1600 Principles of Biology II	3	X		
BL1505 Principles of Biology Lab I	1	X			BL1605 Principles of Biology Lab II	1	X		
Total Credit Hours	16				Total Credit Hours	16			

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	
Humanities Course	3		X		PH1260 General Physics II	3	X		
Social Sciences Course	3		X		PH1261 General Physics Lab II	1	X		
Creative and Performing Arts (CAPA)*	1-3		X		BL2130 Genetics	4	X		X
Total Credit Hours	15-17				Total Credit Hours	16			

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			CH4360 Biochemistry II	3	X		
CH4350 Biochemistry I	3	X			CH4780 Chemistry Seminar	0	X		
CH4370 Biochemistry Laboratory	1	X			Engaging the Global Community (EGC)	3		X	
Issues in Social Justice Course (ISJ)	3		X		TRS Course	3		X	
Language Requirement	3		X		Language Requirement	3		X	
					Philosophy/Knowledge/Reality (PLKR)	3		X	
Total Credit Hours	15				Total Credit Hours	18			

Fourth Year

Fall Semester	Credits	Major	Core	Minor/Other	Spring Semester	Credits	Major	Core	Minor/Other
CH or BL Elective**	3	X			CH or BL Elective**	3	X		
Career Elective	6	X	X	X	Linked Pair of Courses	6		X	
CH3991 Undergraduate Research	1	X			Career Electives	3	X	X	X
Philosophy Values/Society (PLVS)	3		X		CH4810 Inorganic Chemistry	3	X		
TRS Course	3		X		CH4820 Inorganic Chemistry Lab	1	X		
Total Credit Hours	16				Total Credit Hours	16			

If you are planning to attend graduate school or a health professions program, take the GRE or MCAT in summer between years 3 and 4 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.

CH3994 (with 3 credits of CH3991-2-3). One of these should be taken in the senior year.

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