

John Carroll University Chemistry and Biochemistry Department

B.S. Chemistry with Biochemistry Concentration, 5th year MBA 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		COM1250 Speech Communications	3		X	
BL1500 Principles of Biology I	3	X			BL1600 Principles of Biology II	3	X		
BL1505 Principles of Biology I Lab	1	X			BL1605 Principles of Biology II Lab	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		
Career or Program Electives	6	X	X	X	CH2610 Analytical Chemistry	3	X		
PH1250 General Physics I	3	X			CH2630 Analytical Chemistry Lab (QA)	1	X	X	
PH1251 General Physics I Lab	1	X			PH1260 General Physics II	4	X		
BL1100 Business Analysis with Excel	1			X	PH1261 General Physics II Lab	1	X		
					EC2201 Fundamentals of Economics	3			X
					Creative and Performing Arts (CAPA)	1-3		X	
Total Credit Hours	15				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			CH4360 Biochemistry II	3	X		
CH4350 Biochemistry I	3	X			CH4780 Chemistry Seminar	0	X		
CH4370 Biochemistry I Lab	1	X			Management	3			X
AC2201 Fundamentals of Accounting	3			X	Engaging the Global Community (EGC)	3		X	
BL2130 Genetics	4	X			TRS Course	3		X	
Language Requirement	3		X		Language Requirement	3		X	
					Philosophy Knowledge/Reality (PLKR)	3		X	
Total Credit Hours	17				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 Elective**	3	X		
CH3670 Physical Chemistry Lab I	2	X			FN3312 Business Finance	3			X
Issues in Social Justice Course (ISJ)	3		X		Linked Pair of Courses	6		X	
PL2086 Business Ethics (PLVS)	3		X	X	TRS Course	3		X	
Social Science Course	3		X		Humanities Course	3		X	
MK3301 Marketing Principles	3			X					
Total Credit Hours	17				Total Credit Hours	15			

If you are planning to attend graduate school, take the GRE in summer between the 3rd and 4th years or early fall and begin submitting applications in the fall of the 4th year.

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

Notes:

*Well prepared students may substitute the CH1410-1440 sequence with CH1510/1530 - Chemical Principles and Lab in the Fall Semester.

471 and PS426 and others by petition

CH398 or CH399D (with three credits of CH399). 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.