

# John Carroll University Chemistry & Biochemistry Department

## Chemistry Major (3+2 Chem Eng Program at CWRU) Study Plan (JCU Portion)

### 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
PH1250 General Physics I	4	X			PH1260 General Physics II	4	X		
PH1511 Physics Workshop I	1	X			PH1521 Physics Workshop II	1	X		
<b>Total Credit Hours</b>	<b>17</b>				<b>Total Credit Hours</b>	<b>17</b>			

### 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		

MT2330 Calculus/Analytical Geometry III	4	X		
CS1280 Problem Solving w/Programming	3	X		
CS1281 Problem Solving/Program lab	1	X		
TRS Course	3			
Engaging the Global Community (EGC)	3			
<b>Total Credit Hours</b>	<b>18</b>			

Fall Semester	Credits	Major
CH3630 Physical Chemistry I	3	X
CH3670 Physical Chemistry I Lab	2	X
CH4410 Instrumental Analysis	3	X
CH4430 Instrumental Analysis Lab*	2	
Humanities Course	3	

Please consult your academic advisor to address specific needs.