Bachelor of Science in Chemistry with a Concentration in Biochemistry

Chemistry (CHEM)

General Chemistry lecture and lab	□ 211 (3)	□ 213 (1)	□ 212 (3)	□ 214 (1) (satisfies Natural Science requirement)
Organic Chemistry lecture and lab	□ 313 (3)	□ 315(2)	□ 314 (3)	□ 318 (2)
Elementary Quantitative Analysis	□ 321 (4)			
Physical Chemistry lecture and lab	□ 331 (3)	□ 336 (2)		
Bioinorganic Chemistry	□ 446 (3)			
Biochemistry I and II	□ 463 (4)	□ 464 (3)		
Biochemistry Lab	□ 465 (2)			

Biology (BIOL)

Cell Structure and Function	□ 213 (4)
Biology of Microorganisms	□ 305 (3)
Biology of Microorganisms Lab	□ 306 (1)

CHEM or BIOL (302-499) Electives □ ___ (9)

Courses from other science/math disciplines may be substituted as electives, subject to prior approval of the undergraduate coordinator.

Mathematics (MATH)

Analytic Geometry and Calculus	□ 113 (4)	□ 114 (4) (satisfies Quantitative Reasoning requirement)

Physics (PHYS)

College Physics	□ 243 (3)	□ 245 (3)
College Physics Lab	□ 244 (1)	□ 246 (1)
-or-		
University Physics	□ 160 (3)	□ 260 (3)
University Physics Lab	□ 161 (1)	□ 261 (1)

Mason Core (approved courses are listed in the University Catalog)

Written Communication	□ ENGH 101 (3)	□ ENGH 302 (3)
Oral Communication	□ COMM 100 or 101 (3)	
Western Civilization/World History	□ HIST 100 or 125 (3)	
Information Technology	□ ___ (3)	
Literature	□ ___ (3)	
Fine Arts	□ ___ (3)	
Social and Behavioral Sciences	□ ___ (3)	
Global Understanding	□ ___ (3)	
Synthesis	□ ___ (3)	

Electives from any area except PRLS/PHED □ (18)

TOTAL CREDITS REQUIRED: 120 Minimum (of which 45 must be upper-division ≥ 300 level); overall GPA ≥ 2.00; major requirements GPA ≥ 2.30; maximum of two courses of CHEM with a "D" grade. All CHEM prerequisite courses require a grade of C or better. 9/21/16

Sample Schedule
BS: Concentration in Biochemistry

FRESHMAN YEAR (29 CR)

Semester 1		**Semester 2**	
CHEM 211, 213 General Chemistry I	4	CHEM 212, 214 General Chemistry II	4
MATH 113 Anal. Geom. & Calc. I	4	MATH 114 Anal. Geom. & Calc. II	4
BIOL 213 Cell Structure & Function	4	HIST requirement	3
ENGH 101	3	Literature requirement	3
	15		**14**

SOPHOMORE YEAR (31 CR)

Semester 3		**Semester 4**	
CHEM 313 Organic Chemistry I	3	CHEM 314 Organic Chemistry II	3
CHEM 315 Organic Chemistry Lab I	2	CHEM 318 Organic Chemistry Lab II	2
PHYS 243 or 160 Physics I	3	CHEM 321 Elementary Quant. Anal.	4
PHYS 244 or 161 Physics Lab I	1	PHYS 245 or 260 Physics II	3
Social and Behavioral Sciences req.	3	PHYS 246 or 261 Physics Lab II	1
COMM requirement	3	IT requirement	3
	15		**16**

JUNIOR YEAR (30 CR)

Semester 5		**Semester 6**	
CHEM 331 Physical Chemistry I	3	CHEM 464 General Biochemistry II	3
CHEM 336 Physical Chemistry Lab I	2	CHEM 465 Biochemistry Lab	2
CHEM 463 General Biochemistry I	4	BIOL 305 Biol. of Microorganisms	3
ENGH 302	3	BIOL 306 Biol. of Microorg. Lab	1
Elective	3	Global Understanding requirement	3
		Elective	3
	15		**15**

SENIOR YEAR (30 CR)

Semester 7		**Semester 8**	
CHEM/BIOL Elective I	3	CHEM/BIOL Elective II	3
CHEM 446 Bioinorganic Chemistry	3	CHEM/BIOL Elective III	3
Fine Arts requirement	3	Synthesis requirement	3
Electives	6	Electives	6
	15		**15**

rev. 9/21/16