

Bachelor of Science in Chemistry
American Chemical Society Accredited Degree
Effective for Admissions in Fall, 2017

Chemistry (CHEM)

General Chemistry lecture and lab	<input type="checkbox"/> 211 (3)	<input type="checkbox"/> 213 (1)	<input type="checkbox"/> 212 (3)	<input type="checkbox"/> 214 (1) (satisfies Natural Science requirement)
Organic Chemistry lecture and lab	<input type="checkbox"/> 313 (3)	<input type="checkbox"/> 315(2)	<input type="checkbox"/> 314 (3)	<input type="checkbox"/> 318 (2)
Quantitative Chemical Analysis	<input type="checkbox"/> 321 (4)			
Physical Chemistry lecture and lab	<input type="checkbox"/> 331 (3)	<input type="checkbox"/> 336 (2)	<input type="checkbox"/> 332 (3)	<input type="checkbox"/> 337 (2)
Instrumental Methods of Chemical Analysis	<input type="checkbox"/> 422 (3)			
Instrumental Methods of Chemical Analysis Lab	<input type="checkbox"/> 423 (2)			
Prop. and Bonding of Inorganic Compounds	<input type="checkbox"/> 441 (3)			
Inorganic Preparations and Techniques	<input type="checkbox"/> 445 (2)			
General Biochemistry I	<input type="checkbox"/> 463 (4)			

CHEM Electives (any lec/lab/research course(s)) ____ (3)

One In-Depth course from the following:

Synthetic/Mechanistic Organic Chemistry	<input type="checkbox"/> 413 (3)	General Biochemistry II	<input type="checkbox"/> 464 (3)
Aquatic Environmental Chemistry	<input type="checkbox"/> 427 (3)	Chemistry of Enzyme-Catalyzed Reactions	<input type="checkbox"/> 467 (3)
Atmospheric Chemistry	<input type="checkbox"/> 438 (3)	Bioorganic Chemistry	<input type="checkbox"/> 468 (3)
Chemical Oceanography	<input type="checkbox"/> 458 (3)		

Mathematics (MATH)

Analytic Geometry and Calculus 113 **-or-** 123-124 (4) 114 (4) 213 (3) (satisfies Quant. Reasoning req.)

Physics (PHYS)

University Physics	<input type="checkbox"/> 160 (3)	<input type="checkbox"/> 260 (3)
University Physics Lab	<input type="checkbox"/> 161 (1)	<input type="checkbox"/> 261 (1)

Biology (BIOL)

Cell Structure and Function 213 (4) (prerequisite for CHEM 463)

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

Written Communication	<input type="checkbox"/> ENGH 101 (3)	<input type="checkbox"/> ENGH 302 (3)
Oral Communication	<input type="checkbox"/> COMM 100 or 101 (3)	
Western Civilization/World History	<input type="checkbox"/> HIST 100 or 125 (3)	
Information Technology	<input type="checkbox"/> ____ (3)	
Literature	<input type="checkbox"/> ____ (3)	
Fine Arts	<input type="checkbox"/> ____ (3)	
Social and Behavioral Sciences	<input type="checkbox"/> ____ (3)	
Global Understanding	<input type="checkbox"/> ____ (3)	
Synthesis	<input type="checkbox"/> ____ (3)	

Electives from any area except PRLS/PHED (15)

TOTAL CREDITS REQUIRED: 120 Minimum (of which 45 must be upper-division \geq 300 level); overall GPA \geq 2.00; major requirements GPA \geq 2.30; maximum of two courses of CHEM with a "D" grade. All CHEM prerequisite courses require a grade of C or better. See the "Prerequisites for CHEM Courses" document for a complete list.

Rev. 2/21/2017

Sample Schedule: BS
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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
HIST requirement	3	BIOL 213 Cell Structure & Function	4
ENGH 101	3	COMM requirement	3
	14		15

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 160 University Physics I	3	CHEM 321 Quant. Chem. Analysis	4
PHYS 161 University Physics Lab I	1	PHYS 260 University Physics II	3
MATH 213 Anal. Geom. & Calc. III	3	PHYS 261 University Physics Lab I	1
IT requirement	3	Literature requirement	3
	15		16

JUNIOR YEAR (29 CR)

Semester 5		Semester 6	
CHEM 331 Physical Chemistry I	3	CHEM 332 Physical Chemistry II	3
CHEM 336 Physical Chemistry Lab I	2	CHEM 337 Physical Chemistry Lab II	2
CHEM 463 Gen. Biochemistry I	4	In-Depth CHEM Elective	3
ENGH 302	3	CHEM Elective	3
Social and Behavioral Sciences req.	3	Fine Arts requirement	3
	15		14

SENIOR YEAR (31 CR)

Semester 7		Semester 8	
CHEM 441 Prop./Bond. Inorg. Comp.	3	CHEM 445 Inorg. Prep. & Techniques	2
CHEM 422 Instr. Meth. Chem. Anal.	3	CHEM 423 Instr. Meth. Chem. Anal. Lab	2
Global Understanding requirement	3	Synthesis requirement	3
Electives	6	Electives	9
	15		16