

# CHEMISTRY B.S. - ENVIRONMENTAL CHEMISTRY

## Bachelor of Science - Chemistry; Environmental Chemistry Concentration

College of Humanities & Sciences

Degree Specific Credits: 91

Required Cumulative GPA: 2.0

Catalog Year: 2018-2019

### General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

### Summary

Code	Title	Hours
Lower-Division Core Courses		54
	General Chemistry	
	Organic Chemistry	
	Physics	
	Mathematics	
	Geology	
	Biochemistry Biology	
Upper-Division Core Courses		26
	Analytical Chemistry	
	Physical Chemistry	
	Inorganic Chemistry	
	Biochemistry	
	Statistics	
	Geology	
Advanced Electives		8
Ethics		3
Total Hours		91

### Lower-Division Core Courses

*General Chemistry*

Code	Title	Hours
<b>Complete all of the following courses:</b>		
CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

### Organic Chemistry

Code	Title	Hours
<b>Complete all of the following courses:</b>		
CHMY 221 & CHMY 222	Organic Chemistry I and Organic Chemistry I Lab	5
CHMY 223 & CHMY 224	Organic Chemistry II and Organic Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

### Physics

Code	Title	Hours
<b>Complete all of the following courses:</b>		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	5
Total Hours		10

Minimum Required Grade: C-

### Mathematics

Code	Title	Hours
<b>Complete all of the following courses:</b>		
M 171	Calculus I	4
M 172	Calculus II	4
Total Hours		8

Minimum Required Grade: C-

### Geology

Code	Title	Hours
<b>Complete all of the following courses:</b>		
GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
Total Hours		4

Minimum Required Grade: C-

### Biochemistry Biology

Code	Title	Hours
<b>Complete all of the following courses:</b>		
BCH 110	Intro Biology for Biochemists	3
BCH 111	Intro Biol for Biochemists Lab	1
BIOB 260	Cellular and Molecular Biology	4
BIOB 272	Genetics and Evolution	4
Total Hours		12

Minimum Required Grade: C-

### Upper-Division Core Courses

*Analytical Chemistry*

Code	Title	Hours
<b>Complete all of the following courses:</b>		
CHMY 311	Analytical Chem-Quant Analysis	4

CHMY 421	Advanced Instrument Analysis	4
Total Hours		8

Minimum Required Grade: C-

### Physical Chemistry

Code	Title	Hours
<b>Complete the following course:</b>		
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		4

Minimum Required Grade: C-

### Inorganic Chemistry

Code	Title	Hours
<b>Complete the following course:</b>		
CHMY 401	Advanced Inorganic Chemistry	3
Total Hours		3

Minimum Required Grade: C-

### Biochemistry

Code	Title	Hours
<b>Complete the following course:</b>		
BCH 480	Advanced Biochemistry I	3
Total Hours		3

Minimum Required Grade: C-

### Statistics

Code	Title	Hours
<b>Complete all of the following courses:</b>		
STAT 451	Statistical Methods I	3
STAT 457	Computer Data Analysis I	1
Total Hours		4

Minimum Required Grade: C-

### Geology

Code	Title	Hours
<b>Complete the following course:</b>		
GEO 327	Geochemistry	4
Total Hours		4

Minimum Required Grade: C-

## Advanced Electives

**Note:** A maximum of 3 credits each of CHMY 492, BIOB 492, and GEO 492 be applied to meet the advanced electives requirement. In addition, a maximum of 5 credits of a language may be applied to meet the advanced electives requirement.

Code	Title	Hours
<b>Complete 8 credits from the following courses:</b>		
BIOB 490	Adv Undergrad Research	8
BIOB 492	Independent Study	
BIOE 370	General Ecology	

BIOE 439	Stream Ecology	
BIOE 453	Ecology of Small & Large Lakes	
BIOM 360	General Microbiology (equiv to BIOM 260)	
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	
CHMY 391	Special Topics/Expmtl Crse	
CHMY 402	Advanced Inorganic Chem Lab	
CHMY 403	Descriptive Inorganic Chem	
CHMY 442	Aquatic Chemistry	
CHMY 465	Organic Spectroscopy	
CHMY 466	FT-NMR Optn for Undrgrd Rsrch	
CHMY 491	Special Topics/Expmtl Crse	
CHMY 492	Independent Study	
GEO 320	Global Water	
GEO 420	Hydrogeology	
GEO 492	Independent Study	
STAT 452	Statistical Methods II	
Total Hours		8

Minimum Required Grade: C-

### Ethics

Code	Title	Hours
<b>Complete the following course:</b>		
CHMY 305E	Ethics, Literature and Writing in the Sciences	3
Total Hours		3

Minimum Required Grade: C-