CHEMISTRY B.S. -PHARMACOLOGY

Bachelor of Science - Chemistry; Pharmacology Concentration College of Humanities & Sciences

Degree Specific Credits: 87

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/generaleducation-requirements) of the catalog.

Summary

Code	Title	Hours
Lower-Divisi	on Core Courses	46
General C	hemistry	
Organic C	hemistry	
Biochemi	stry and Biology	
Physics		
Mathema	tics	
Upper-Divisi	on Core Courses	35
Analytica	l Chemistry	
Physical	Chemistry	
Inorganic	Chemistry	
Biochemi	stry	
Pharmace	ology	
Biology		
Advanced El	ectives	3
Ethics		3
Total Hours		87

Lower-Division Core Courses

General Chemistry

Code	Title	Hours
Complete all of the	ne following courses:	
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 Require	ed Grade: C-	
Organic Chemist	try	
Code	Title	Hours

Code	Title	Hours
Complete all of t	he following courses:	
CHMY 221	Organic Chemistry I	3

	Organia Chamiatry II ah	2
CHMY 222	Organic Chemistry I Lab	2
CHMY 223	Organic Chemistry II	3
CHMY 224	Organic Chemistry II Lab	2
Total Hours		10
Minimum Requi	red Grade: C-	
Biochemistry a Code	n <mark>d Biology</mark> Title	Hours
Complete all of	the following courses:	
BCH 110	Intro Biology for Biochemists	3
BCH 111	Intro Biol for Biochemists Lab	1
BIOB 260	Cellular and Molecular Biology	4
Total Hours		8
Minimum Requi	red Grade: C-	
Physics		
Code	Title	Hours
Complete all of	the following courses:	
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	5
PHSX 217N	Fund of Physics w/Calc II	5
& PHSX 218N	and Physics Laboratory II w/Calc	
		10
Total Hours		10
Total Hours Minimum Requi	red Grade: C-	10
Minimum Requi Mathematics		
Minimum Requi Mathematics Code	Title	Hours
Minimum Requi Mathematics Code Complete all of	Title the following courses:	Hours
Minimum Requi Mathematics Code Complete all of M 171	Title the following courses: Calculus I	Hours 4
Minimum Requi Mathematics Code Complete all of	Title the following courses:	Hours
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi	Title the following courses: Calculus I Calculus II red Grade: C-	Hours 4 4
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi	Title the following courses: Calculus I Calculus II red Grade: C-	Hours 4 4
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses	Title the following courses: Calculus I Calculus II red Grade: C- on Core Courses s in all subcategories listed are required.	Hours 4 4
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi	Title the following courses: Calculus I Calculus II red Grade: C- on Core Courses s in all subcategories listed are required.	Hours 4 4
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses Analytical Cher Code	Title the following courses: Calculus I Calculus II red Grade: C- fon Core Courses is in all subcategories listed are required. mistry Title	Hours 4 4 8
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses Analytical Cher Code	Title the following courses: Calculus I Calculus II red Grade: C- Ton Core Courses s in all subcategories listed are required. mistry	Hours 4 4 8 Hours
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses Analytical Cher Code Complete all of	Title the following courses: Calculus I Calculus II red Grade: C- Ton Core Courses s in all subcategories listed are required. mistry Title the following courses:	Hours 4 4 8
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses Analytical Cher Code Complete all of CHMY 311	Title the following courses: Calculus I Calculus II Calculus II red Grade: C- con Core Courses s in all subcategories listed are required. mistry Title the following courses: Analytical Chem-Quant Analysis	Hours 4 4 8 Hours 4
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses Analytical Cher Code Complete all of CHMY 311 CHMY 421	Title the following courses: Calculus I Calculus II Calculus II red Grade: C- fon Core Courses is in all subcategories listed are required. mistry Title the following courses: Analytical Chem-Quant Analysis Advanced Instrument Analysis	Hours 4 4 8 Hours 4
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses Analytical Cher Code Complete all of CHMY 311 CHMY 421 Total Hours Minimum Requi Physical Chem	Title the following courses: Calculus I Calculus II Calculus II red Grade: C- Ton Core Courses is in all subcategories listed are required. mistry Title the following courses: Analytical Chem-Quant Analysis Advanced Instrument Analysis red Grade: C- istry	Hours 4 4 8 Hours 4 4 8
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses Analytical Cher Code Complete all of CHMY 311 CHMY 421 Total Hours Minimum Requi Physical Cher Code	Title the following courses: Calculus I Calculus II Calculus II red Grade: C- Ton Core Courses as in all subcategories listed are required. mistry Title the following courses: Analytical Chem-Quant Analysis Advanced Instrument Analysis red Grade: C- istry Title	Hours 4 4 8 Hours 4
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses Analytical Cher Code Complete all of CHMY 311 CHMY 421 Total Hours Minimum Requi Physical Chem Code Complete the fo	Title the following courses: Calculus I Calculus II ca	Hours 4 4 8 Hours 4 4 8 Hours
Minimum Requi Mathematics Code Complete all of M 171 M 172 Total Hours Minimum Requi Upper-Divisi Rule: All courses Analytical Cher Code Complete all of CHMY 311 CHMY 421 Total Hours Minimum Requi Physical Cher Code	Title the following courses: Calculus I Calculus II Calculus II red Grade: C- Ton Core Courses as in all subcategories listed are required. mistry Title the following courses: Analytical Chem-Quant Analysis Advanced Instrument Analysis red Grade: C- istry Title	Hours 4 4 8 Hours 4 4 8

Inorganic Chemistry		
Code	Title	Hours
Complete the fo	llowing course:	
CHMY 401	Advanced Inorganic Chemistry	3
Total Hours		3

Minimum Required Grade: C-

Biochemistry

Code	Title	Hours
Complete all of	the following courses:	
BCH 480	Advanced Biochemistry I	3
BCH 482	Advanced Biochemistry II	3
Total Hours		6

Minimum Required Grade: C-

Pharmacology

Code	Title	Hours
Complete all of t	the following courses:	
PHAR 421	Medicinal Chem I	3
PHAR 422	Medicinal Chem II	3
PHAR 443	Pharmacol & Toxicol I	4
PHAR 444	Pharmacology & Toxicol II	4
Total Hours		14

Minimum Required Grade: C-

Advanced Electives

Note: 3 credits maximum of CHMY 492 may be applied toward degree requirements. 3 credits maximum of BIOB 490 may be applied toward degree requirements.

Code	Title	Hours
Complete 3 credi	ts from the following courses:	3
BIOB 490	Adv Undergrad Research	
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	
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 492	Independent Study	
Total Hours		3

Minimum Required Grade: C-

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

Minimum Required Grade: C-