

CHEMISTRY B.A.

The courses required for the B.A. degree provide a less extensive training in chemistry than do the courses required for the American Chemical Society certified B.S. degree. This is to allow the student to supplement his or her program with courses that meet his or her specific needs. Thus, this degree provides the core of traditional preparation in chemistry together with latitude for combination with an interdisciplinary field or the Teacher Education Program. It is strongly advised that students using this degree obtain faculty advice in planning their program.

Bachelor of Arts - Chemistry

College of Humanities & Sciences

Degree Specific Credits: 79

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.umd.edu/academics/general-education-requirements>) of the catalog.

Summary

Code	Title	Hours
Lower-Division Core Courses		45
General Chemistry		
Organic Chemistry		
Physics		
Mathematics		
Computer Science		
Upper-Division Core Courses		16
Analytical Chemistry		
Physical Chemistry		
Advanced Electives		15
Ethics		3
Teaching Chemistry Track		
Total Hours		79

Lower-Division Core Courses

General Chemistry

Code	Title	Hours
Complete all of the 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 Required Grade: C-

Organic Chemistry

Code	Title	Hours
Complete all of the following courses:		
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
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 & 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
Complete all of the following courses:		
M 171	Calculus I	4
M 172	Calculus II	4
M 273	Multivariable Calculus	4
Total Hours		12

Minimum Required Grade: C-

Computer Science

Code	Title	Hours
Complete all of the following courses:		
CSCI 125	Computation in the Sciences	3

Minimum Required Grade: C-

Upper-Division Core Courses

Analytical Chemistry

Code	Title	Hours
Complete all of the following courses:		
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
Complete all of the following courses:		
CHMY 371	Phys Chem-Qntm Chm & Spctrscopy	4
CHMY 373	Phys Chem-Kntcs & Thrmdynmcs	4
Total Hours		8

Minimum Required Grade: C-

Advanced Electives

Rule: Complete 9 credits of advanced electives in Chemistry or Biochemistry approved by the Chemistry adviser and 6 credits of advanced electives at the discretion of the student. 15 total credits required.

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-

Teaching Chemistry Track

Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
 - Secondary Education Licensure Program (<http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php>)
 - Licensure Degree Requirements (<http://catalog.umt.edu/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure>)
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.

Teaching Chemistry Required Courses

Note: The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Science.

Code	Title	Hours
Complete all of the following courses:		
EDU 497	Teaching and Assessing	4
ENST 472	Gen Sci: Conservation Education	3
Total Hours		7

Minimum Required Grade: C-

Secondary Teaching Licensure

Note: For endorsement to teach chemistry, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure (<http://catalog.umt.edu/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure>). For more information, see the Teaching and Learning Department (<http://catalog.umt.edu/colleges-schools-programs/education-human-sciences/teaching-learning>).