

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 Preparation program. It is strongly advised that students using this degree obtain faculty advice in planning their program.

Bachelor of Arts - Chemistry

College Humanities & Sciences

Degree Specific Credits: 95

Required Cumulative GPA: 2.0

Catalog Year: 2017-2018

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

Lower Core Courses	45
General Chemistry	
Organic Chemistry	
Physics	
Mathematics	
Computer Science	
Upper Core Courses	16
Analytical Chemistry	
Physical Chemistry	
Advanced Electives	21
Modern Foreign Language	10
Ethics	3
Total Hours	95

Lower Core Courses

Rule: All subcategories must be completed

General Chemistry

Rule: Complete both 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

Rule: Complete all courses

CHMY 221	Organic Chemistry I	3
CHMY 222	Organic Chemistry I Lab	2
CHMY 223	Organic Chemistry II	3
CHMY 224	Organic Chemistry II Lab	2
Total Hours		10

Minimum Required Grade: C-

Physics

Rule: Complete either PHSX 205N-PHSX 206N and PHSX 207N-PHSX 208N or PHSX 215N-PHSX 216N and PHSX 217N-PHSX 218N

Select one of the following physics sequences: 10

PHSX 205N & PHSX 206N	College Physics I and College Physics I Laboratory	
PHSX 207N & PHSX 208N	College Physics II and College Physics II Laboratory	
OR		
PHSX 215N & PHSX 216N	Fund of Physics w/Calc I and Physics Laboratory I w/Calc	
PHSX 217N & PHSX 218N	Fund of Physics w/Calc II and Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

Mathematics

Rule: Complete all 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

Rule: Complete course

CSCI 250	Computer Mdlng/Science Majors	3
Total Hours		3

Minimum Required Grade: C-

Upper Core Courses

Rule: All subcategories must be completed

Analytical Chemistry

Rule: 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

Rule: Complete all of the following courses

CHMY 371	Phys Chem-Qntm Chm & Spctrsctpy	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 Chemistry adviser and 6 credits of advanced electives at the discretion of the student.

Minimum Required Grade: C-

21 Total Credits Required

Modern Foreign Language

Rule: Complete 10 credits of modern foreign language

Minimum Required Grade: Pass

10 Total Credits Required

Ethics

Rule: Complete the following course

CHMY 305E	Ethics, Literature and Writing in the Sciences	3
Total Hours		3

Minimum Required Grade: C-

Teaching Chemistry Concentration

To sign up for this option, you need to contact the Curriculum and Instruction Department. Do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this option must come from the Curriculum and Instruction Department.

Concentrations will not appear on your UM transcript, diploma, university lists, student data system, or university publication and are used for advising purposes only. You do not fill out a major change for a concentration.

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the teacher preparation program through the Department of Curriculum and Instruction. Individuals must complete the teaching major/teaching concentration within that degree program, which may contain different course requirements than the academic major since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching concentration and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program (<http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php>)

- Licensure Degree Requirements (<http://catalog.umt.edu/past-catalogs/2017-2018/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure>)

Teaching Preparation Requirements

Rule: Complete both of the following

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

EDU 497	Teaching and Assessing	4
ENST 472	Gen Sci: Conservation Education	3
Total Hours		7

Minimum Required Grade: C-

Teaching Licensure Requirements

Note: Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Curriculum & Instruction (<http://catalog.umt.edu/past-catalogs/2017-2018/colleges-schools-programs/education-human-sciences/teaching-learning>) in the College of Education and Human Sciences (<http://catalog.umt.edu/past-catalogs/2017-2018/colleges-schools-programs/education-human-sciences>) for more information. A major GPA of 2.75 is required to be eligible for student teaching.