

# CHEMISTRY EDUCATION MINOR

- This minor contains additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the education/teaching concentration 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 education/teaching concentration of a major or education/teaching 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/teaching-learning/lic-secondary-licensure/>)
- To complete this minor, you need to contact the Teaching and Learning Department. Approvals for this concentration must come from the Teaching and Learning Department.
- Individuals completing this minor must also complete the education/teaching concentration of a major in another teaching content area.

## Minor - Chemistry Education

### Summary

Code	Title	Hours
Lower-Division Core Courses		18
Upper-Division Core Courses		13
Required Courses Outside the Minor		27
<b>Total Hours</b>		<b>58</b>

Degree Specific Credits: 58

Required Cumulative GPA: 2.0

### Lower-Division Core Courses

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
CHMY 221	Organic Chemistry I	3
CHMY 222	Organic Chemistry I Lab	2
CHMY 223	Organic Chemistry II	3
<b>Total Hours</b>		<b>18</b>

Minimum Required Grade: C-

### Upper-Division Core Courses

Code	Title	Hours
<b>Complete the following course:</b>		
CHMY 311	Analytical Chemistry-Quantitative Analysis	4
CHMY 373	Physical Chemistry-Kinetics & Thermodynamics	4
CHMY 485	Laboratory Safety	1
BCH 380 or BCH 480	Biochemistry Advanced Biochemistry I	4
<b>Total Hours</b>		<b>13</b>

Minimum Required Grade: C-

### Required Courses Outside the Minor

Code	Title	Hours
<b>Complete all of the following courses:</b>		
CSCI 150	Introduction to Computer Science	3
EDU 497	Teaching and Assessing	3
ENST 472	General Science: Conservation Education	3
M 162 or M 171	Applied Calculus Calculus I	4
PHSX 205N	College Physics I	4
PHSX 206N	College Physics I Laboratory	1
PHSX 207N	College Physics II	4
PHSX 208N	College Physics II Laboratory	1
STAT 216	Introduction to Statistics	4
<b>Total Hours</b>		<b>27</b>

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/teaching-learning/lic-secondary-licensure/>). For more information, see the Teaching and Learning Department (<http://catalog.umt.edu/colleges-schools-programs/education/teaching-learning/>).