Chemistry Teaching Option

The Chemistry – Teaching Option major is designed for students who wish to become licensed to teach Chemistry in grades 5 - 12. Upon completion of the degree, students are eligible for licensure in the state of Montana. Secondary education students are encouraged to pursue a teaching minor in an additional content area and should contact an advisor for details. Obtaining a teaching minor will require more than eight semesters. For more information on admission to the Teacher Education Program, Student Teaching, Licensure, Professional Expectations and more, please visit: http://catalog.montana.edu/undergraduate/education-health-human-development/department-education/teacher-education-program/

### Freshman Year

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<th>Credits</th>
<th>Fall</th>
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Please take one of the following:

- **CHMY 141** - College Chemistry I
- or **CHMY 151** - Honors College Chemistry I

- **CHMY 194** - Seminar/Workshop
- **M 151Q** - Precalculus
- **HDFS 101IS** - Indiv and Fam Dev: Lifespan
- University and Core Electives

Please take one of the following:

- **CHMY 143** - College Chemistry II
- or **CHMY 153** - Honors College Chemistry II

- **EDU 202** - Early Field Experience
- **M 161Q** - Survey of Calculus
- **University Core and Electives**

Year Total: 15

### Sophomore Year

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Please take one of the following:

- **BIOB 160** - Principles of Living Systems
- or **BIOB 260** - Cellular and Molecular Biology

Please take one of the following:

- **CHMY 321** - Organic Chemistry I
- or **CHMY 331** - Honors Organic Chemistry I

- **EDU 211D** - Multicultural Education
- **EDU 223IS** - Educ Psych and Adolescent Dev
- **University Core and Electives**

Year Total: 15

### Junior Year

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Please take one of the following:

- **BCH 441** - Biochemistry of Macromolecules
- **BCH 440R** - Undergraduate Research
- or **CHMY 490R** - Undergraduate Research

- **CHMY 361** - Elements of Physical Chemistry
- **CHMY 362** - Elements of Physical Chemistry Lab
- **CHMY 394** - Seminar/Workshop
- or **BCH 394** - Seminar/Workshop

Please take one of the following:

- **CHMY 490R** - Undergraduate Research
- or **CHMY 490R** - Undergraduate Research

- **EDU 370** - Integrating Tech into Educ
- **University Core and Electives**

Year Total: 18

### Senior Year

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Please take one of the following:

- **BCH 490R** - Undergraduate Research
- or **CHMY 490R** - Undergraduate Research

- **CHMY 394** - Seminar/Workshop
- or **BCH 494** - Seminar/Workshop

- **University Core and Electives**
- **EDU 408** - Professional Issues: K-12
- **EDU 495R** - Student Teaching

Year Total: 15

Total Program Credits: 120

### Acceptable Chemical and Biochemical Electives Include:

- **CHMY 350** - Astrobiology
- **CHMY 401** - Advanced Inorganic Chemistry
- **CHMY 417** - Synthetic Chemistry
- **CHMY 421** - Advanced Instrument Analysis
- **BCH 442** - Metabolic Regulation
- **BCH 444R** - Biochemistry & Molecular Biology Methods

1. Four (4) credits of CHMY 490R are tabulated. Students are encouraged to fulfill additional credits of research.
2. A minimum of 9 credits of chemical and biochemical electives are required.
3. CHMY 499 (Senior Year) is required for majors who are writing a thesis for Departmental Honors consideration.

A minimum of 120 credits is required for graduation; 42 of these credits must be in courses numbered 300 and above. The Chemistry Teaching option certifies graduates to be qualified to teach secondary school chemistry. Employment opportunities will be enhanced by obtaining a second area of certification, usually a teaching minor. Obtaining a teaching major, a teaching minor and certification will require more than 120 credits.

### Four (4) credits of CHMY 490R are tabulated. Students are encouraged to fulfill additional credits of research.

### A minimum of 9 credits of chemical and biochemical electives are required.

### CHMY 499 (Senior Year) is required for majors who are writing a thesis for Departmental Honors consideration.