

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: The Teacher Education Program. (<http://catalog.montana.edu/undergraduate/education-health-human-development/department-education/#teachereducationprogramtext>)

Freshman Year	Credits	
	Fall	Spring
Please take one of the following:	4	
CHMY 141 - College Chemistry I & CHMY 142 - College Chemistry I Lab		
CHMY 151 - Honors College Chemistry I & CHMY 152 - Honors College Chemistry I Lab		
CHMY 194 - Seminar/Workshop	1	
M 151Q - Precalculus	4	
HDFS 101IS - Indiv and Fam Dev: Lifespan	3	
University and Core Electives	3	
Please take one of the following:	4	
CHMY 143 - College Chemistry II & CHMY 144 - College Chemistry II Lab		
CHMY 153 - Honors College Chemistry II & CHMY 154 - Honors College Chemistry II Lab		
EDU 223IS - Educ Psych and Adolescent Dev	3	
M 161Q - Survey of Calculus	4	
University Core and Electives	3	
Year Total:	15	14
Sophomore Year	Credits	
	Fall	Spring
Please take one of the following:	4	
BIOB 160 - Principles of Living Systems or BIOB 260 - Cellular and Molecular Biology		
Please take one of the following:	4	
CHMY 321 - Organic Chemistry I & CHMY 322 - Organic Chemistry I Lab		
CHMY 331 - Honors Organic Chemistry I & CHMY 332 - Honors Organic Chemistry I Lab		
EDU 211D - Multicultural Education	3	
Please take one of the following:	4	
PHSX 205 - College Physics I or PHSX 220 - Physics I with Calculus		
CHMY 294 - Seminar/Workshop	1	
CHMY 311 - Fundamental Analytical Chem	4	
Please take one of the following:	4	
CHMY 323 - Organic Chemistry II & CHMY 324 - Organic Chemistry II Lab		

CHMY 333 - Honors Organic Chemistry II & CHMY 334 - Honors Organic Chemistry II Lab		
Please take one of the following:	4	
PHSX 207 - College Physics II or PHSX 222 - Physics II with Calculus		
EDU 370 - Integrating Tech into Educ	3	
University and Core Electives	3	
Year Total:	15	19
Junior Year	Credits	
	Fall	Spring
BCH 441 - Biochemistry of Macromolecules	3	
BCH 490R - Undergraduate Research ¹ or CHMY 490R - Undergraduate Research	2	
CHMY 361 - Elements of Physical Chemistry & CHMY 362 - Elements of Physical Chemistry Lab	5	
CHMY 394 - Seminar/Workshop or BCH 394 - Seminar/Workshop	1	
EDU 347 - Managing the Learning Environment for K-12/Secondary	2	
EDU 382 - Assessmt, Curric, Instructn	3	
BCH 490R - Undergraduate Research ¹ or CHMY 490R - Undergraduate Research		2
CHMY 494 - Seminar/Workshop or BCH 494 - Seminar/Workshop		1
University Core and Electives		5
Biochemical and Chemical Electives ²		6
Year Total:	16	14
Senior Year	Credits	
	Fall	Spring
Chemical and Biochemical Electives ²	3	
EDSP 306 - Exceptional Learners	3	
EDM 403 - Methods: 5-12 Science	3	
EDP 304 - Practicum: 5-12/K-12	2	
EDP 305 - Practicum Lab: 5-12/K-12	1	
University Core and Electives	3	
EDU 495R - Student Teaching		12
Year Total:	15	12
Total Program Credits:	120	

- Four (4) credits of CHMY 490R are tabulated. Students are encouraged to fulfill additional credits of research up to a maximum of 12 credits of 490R research whether it be in CHMY, BCH, or another department.
- 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.

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.

Acceptable Chemical and Biochemical Electives

Include:

CHMY 401	Advanced Inorganic Chemistry	3
CHMY 417	Synthetic Chemistry	3
CHMY 421	Advanced Instrument Analysis	3
BCH 442	Metabolic Regulation	3
BCH 444R	Biochemistry & Molecular Biology Methods	3
CHMY 340	Environmental Chemistry	3