

CHEMISTRY WITH TEACHER CERTIFICATION IN CHEMISTRY (PRESCHOOL-GRADE 12) (B.S.)

Students who wish to pursue P-12 teacher certification in Chemistry must apply to and be admitted to the Teacher Education Program. Please visit the Teacher Education Program website (<http://www.montclair.edu/cehs/academics/cop/>) for the required professional sequence of courses and other important Program requirements, guidelines, and procedures. Students also are strongly advised to review the Teacher Education Program Handbook. Students majoring in chemistry have two teacher certification options to choose from – Physical Science or Chemistry – and should consult with an advisor to determine which certification program they wish to complete. The Teacher Education Professional Sequence Departmental Methods Course is SASE 402 Teaching of Science in Secondary Schools. (Credits are counted in the professional sequence.)

120 credits of coursework is required for the baccalaureate degree with a minimum 3.0 overall GPA. Major GPA requirements differ depending on field of study. Consult the Teacher Education Program Handbook for more information.

Program Requirements Overview

Code	Title	Credits
	General Education Requirements	25
	World Languages and Cultures Requirements	3-6
	Major Requirements	50
	Teacher Education Program Requirements	37
	Free Electives	5-2
	Total Credits	120

Major Requirements

Code	Title	Credits
Required Chemistry Courses		
CHEM 120	General Chemistry I	4
CHEM 121	General Chemistry II	4
CHEM 230	Organic Chemistry I	3
CHEM 231	Organic Chemistry II	3
CHEM 232	Experimental Organic Chemistry I	2
CHEM 233	Experimental Organic Chemistry II	2
CHEM 310	Analytical Chemistry	5
CHEM 311	Instrumental Analysis	4
CHEM 340	Physical Chemistry I	3
CHEM 370	Biochemistry I	3
CHEM 495	The Chemical Literature	1
Math Collateral Courses		
AMAT 120 or MATH 122	Applied Calculus A Calculus I	4
AMAT 220 or MATH 221	Applied Calculus B Calculus II	4

Physics Collateral Courses		
PHYS 191	University Physics I	4
PHYS 192	University Physics II	4
Total Credits		50

Teacher Education Program Requirements

Teacher Education Program Requirements (Teacher Certification in Subject Area P-12) (<http://catalog.montclair.edu/programs/teacher-education-program-requirements-p12/>)

General Education Requirements

Click here for a list of courses that fulfill General Education categories. (<http://catalog.montclair.edu/programs/general-education-requirements-ba-bs/>)

Code	Title	Credits
A. New Student Seminar		
CHEM 190	Freshman Seminar in Chemistry	1
C. Communication		
	<i>1. Writing</i>	3
	<i>2. Literature</i>	3
	<i>3. Communication</i>	3
D. Fine and Performing Arts		
	Complete a 3 credit Fine and Performing Arts course.	3
F. Humanities		
	Complete one course from 1. Great Works and Their Influences or 2. Philosophical and Religious Perspectives	3
G. Computer Science		
	Complete a 3 credit Computer Science course.	3
H. Mathematics		
	Fulfilled in the major.	
AMAT 120	Applied Calculus A or MATH 122 Calculus I	
I. Natural Science Laboratory		
CHEM 120	General Chemistry I (Fulfilled in the major.)	
K. Social Science		
	<i>1. American and European History</i>	3
	<i>2. Global Cultural Perspectives</i>	3
	<i>3. Social Science Perspectives</i>	
EDFD 200	Psychological Foundations of Education (Fulfilled in the Teacher Education sequence.)	
L. Interdisciplinary Studies		
SASE 210	Public Purposes of Education: Democracy and Schooling (Fulfilled in the Teacher Education sequence.)	
Total Credits		25

World Languages and Cultures Requirements

Click here for a list of courses that fulfill World Languages and Cultures categories. (<http://catalog.montclair.edu/programs/world-languages-and-cultures-requirements/>)

Code	Title	Credits
World Languages		
Based on placement exam, complete one or two sequential courses in a single language.		3-6
Total Credits		3-6

Recommended Roadmap to Degree Completion

This recommended four-year plan is provided as an outline for students to follow in order to complete their degree requirements within four years. This plan is a recommendation and students should only use it in consultation with their academic advisor.

Course	Title	Credits
First Year		
Fall		
GENERAL EDUCATION: (A) New Student Seminar		1
GENERAL EDUCATION: (C1) Writing		3
Credits		4
Spring		
GENERAL EDUCATION: (C2) Literature		3
GENERAL EDUCATION: (C3) Communication		3
Credits		6
Total Credits		10