

# 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. Once admitted, students will be matriculated into the B.A. in Secondary Education (<http://catalog.montclair.edu/programs/secondary-education-p12-ba/>) program as a second major.

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.

## Degree Requirements Overview

Code	Title	Credits
	New Student Seminar	1
	SEEDS General Education Requirements	18-21
	Major Requirements	50
	Teacher Education Program Requirements	37
	Free Electives	14-11
	<b>Total Credits</b>	<b>120</b>

## Major Requirements

Code	Title	Credits
<b>Required Chemistry Courses</b>		
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	4
CHEM 340	Physical Chemistry I	3
CHEM 370	Biochemistry I	3
CHEM 410	Instrumental Analysis	5
CHEM 495	The Chemical Literature	1
<b>Math Collateral Courses</b>		
AMAT 120	Applied Calculus A	4

or MATH 122	Calculus I	
AMAT 220	Applied Calculus B	4
or MATH 221	Calculus II	
<b>Physics Collateral Courses</b>		
PHYS 191	University Physics I	4
PHYS 192	University Physics II	4
<b>Total Credits</b>		<b>50</b>

## Co-Major in Secondary Education

Secondary Education (B.A.) (<http://catalog.montclair.edu/programs/secondary-education-p12-ba/>)

## New Student Seminar

Code	Title	Credits
CHEM 190	Freshman Seminar in Chemistry	1
<b>Total Credits</b>		<b>1</b>

## SEEDS General Education Requirements

Click here for a list of courses that fulfill the SEEDS requirements. (<http://catalog.montclair.edu/programs/seeds-general-education-requirements/>)

Code	Title	Credits
<b>Foundations</b>		
<i>Effective Writing I</i>		
	Complete one Effective Writing I course.	3
<i>Effective Writing II</i>		
	Complete one Effective Writing II course.	3
<i>Interactive Communication</i>		
	Complete one Interactive Communication course.	3
<i>Quantitative Reasoning</i>		
	Fulfilled by AMAT 120 or MATH 122 in the major.	
<i>Political and Civic Life</i>		
	Fulfilled by SASE 210 in the Education major.	
<b>World Language</b>		
	Complete two sequential classes in one World Language when starting at the Beginner I or Beginner II level. Complete one class when starting at the Intermediate/Advanced Level.	3-6
<b>Exploration</b>		
	Complete one course from four different Exploration categories:	6
<i>Analyzing Cultures and Societies</i>		
<i>Creative Expression</i>		
<i>Ethical Inquiry</i>		
	Fulfilled by EDFD 200 in the Education major.	
<i>Historical Thinking</i>		
<i>Literary and Artistic Analysis</i>		
<i>Scientific Reasoning</i>		
	Fulfilled by CHEM 120 in the major.	
<b>Total Credits</b>		<b>18-21</b>