

CHEMISTRY (B.S.)(COMBINED B.S./M.A.T. TEACHING WITH TEACHER CERTIFICATION IN CHEMISTRY (PRESCHOOL- GRADE 12) AND TEACHER OF STUDENTS WITH DISABILITIES)

A Combined Degree program enables undergraduate students to enroll in graduate courses in their senior year, which can be counted towards the completion of both their Bachelor's and Master's degree requirements.

The ability to take these "swing courses" allows students to earn both their Bachelor's and Master's degrees in a shortened period of time, typically within five years. Undergraduate students interested in this option can find more information regarding program requirements on the University's Combined Programs website (<https://www.montclair.edu/combined-programs/programs-of-study/>).

The Combined Degree with Dual Certification program is a 5-year program that leads to teacher certification in Chemistry (grades P-12), teacher certification in Teacher of Students with Disabilities, a baccalaureate degree and a master's degree. Interested students must apply to and be admitted to the Teacher Education Program as an undergraduate.

Students must successfully complete the undergraduate portion of the program in order to be admitted to the Graduate School and complete the one-year master's portion of the program. Please visit the Teacher Education Program (<http://www.montclair.edu/cehs/academics/cop/teacher/>) website for the required undergraduate professional sequence of courses, overall course outline, and other important Program requirements, guidelines, and procedures. Students also are strongly advised to review the Teacher Education Program Handbook.

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	36
	Free Electives	6-3
Total Credits		120

Major Requirements

Requirements for the graduate portion of this combined program can be found here. (<http://catalog.montclair.edu/programs/teaching-certification-p12-students-disabilities-combined-bx-mat/>)

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	4
CHEM 340	Physical Chemistry I	3
CHEM 370	Biochemistry I	3
CHEM 410	Instrumental Analysis	5
CHEM 495	The Chemical Literature	1
Math Collaterals		
AMAT 120 or MATH 122	Applied Calculus A Calculus I	4
AMAT 220 or MATH 221	Applied Calculus B Calculus II	4
Physics Collaterals		
PHYS 191	University Physics I	4
PHYS 192	University Physics II	4
Total Credits		50

Teacher Education Program Requirements

Teacher Education Program Requirements for Combined Degree Programs with Subject Area P-12 and Teacher of Students with Disabilities Certifications (<http://catalog.montclair.edu/programs/combined-bx-mat-teacher-education-program-requirements-p12-tds/>)

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		
	1. Writing	3
	2. Literature	3
	3. Communication	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		
1. American and European History		3
2. Global Cultural Perspectives		3
3. Social Science Perspectives		
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(s)

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

Fifth year courses are taken at the graduate level, after matriculation into the graduate portion of this combined degree program.

First Year			
Fall	Credits	Spring	Credits
GENERAL EDUCATION: (A) New Student Seminar	1	GENERAL EDUCATION: (C2) Literature	3
GENERAL EDUCATION: (C1) Writing	3	GENERAL EDUCATION: (C3) Communication	3
	4		6
Third Year			
Fall	Credits	Spring	Credits
SASE 320	3	SASE 322	3
SASE 321	3	SPED 469	3
SPED 279	3		
	9		6
Fourth Year			
Fall	Credits	Spring	Credits
SPED 483	3	SPED 566	3
SPED 488	3	SPED 586	3

	SPED 690	3
	6	9
Total Credits 40		
Fifth Year		
Fall	Credits	Spring Credits
SASE 526	3	SASE 529 6
SASE 527	3	SASE 543 3
SPED 584	3	
Teaching Methods Course	3-4	
	12-13	9
Total Credits 21-22		