EARTH AND ENVIRONMENTAL SCIENCE (B.S.) (COMBINED B.S./M.A.T. TEACHING WITH TEACHER CERTIFICATION IN EARTH SCIENCE (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 Earth Science (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 website (https://www.montclair.edu/cehs/academics/centers-and-institutes/cop/teacher/) 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.

Degree Requirements Overview

Code	Title	Credits
New Student Seminar		1
SEEDS General Education Requirements		18-21
Major Requirements		59-62
Teacher Education Program Requirements		36
Free Electives		6-0
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 Courses		
EAES 105	Physical Geology	4
EAES 220	Mineralogy	4
EAES 240	Earth System History	4
EAES 302	Structural Geology	3
EAES 320	Igneous Metamorphic Petrology	4
EAES 441	Stratigraphy	4
Collateral Chemistry Courses		
Complete one of the following sequences:		7-8
CHEM 100 & EAES 322	Introductory Chemistry and Environmental Geochemistry	
CHEM 120 & CHEM 121	General Chemistry I and General Chemistry II	
Collateral Math Courses		
Complete two courses from the following:		8
AMAT 120 or MATH 122	Applied Calculus A Calculus I	
AMAT 220 or MATH 221	Applied Calculus B Calculus II	
MATH 111	Applied Precalculus	
STAT 230	Data Science and Statistics	
Collateral Physics Courses		
Select one of the following sequences:		7-8
PHYS 191 & PHYS 192	University Physics I and University Physics II	
PHYS 193 & PHYS 194	College Physics I and College Physics II	
Collateral Biology Course		
BIOL 112 or BIOL 113	Principles of Biology: Introduction to the Cell Principles of Biology: Organisms and Diversity	4
Major Electives		
Select one course each in Meteorology, Astronomy and Oceanography for a total of 10-11 credits from the list below.		10-11
Total Credits		**59-62**

Major Electives

Code	Title	Credits
Meteorology		
EAES 201	Understanding Weather and Climate	4
EAES 301	Climatology	3
EAES 403	Meteorology	4
Astronomy		
PHYS 180	Astronomy for Everyone	4
PHYS 280	Astronomy for Physicists	4
Oceanography		
EAES 150	General Oceanography	3
EAES 250	Introduction to Marine Sciences	4
EAES 350	Oceanography	3

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-tsd/)

New Student Seminar

Code	Title	Credits
Students in the Adult Learner program must take GNED 100.		
Complete one course from the following. Some courses may be restricted by major. Consult with an academic advisor.		1
ADVS 198	Pathways to Success	
CHEM 190	Freshman Seminar in Chemistry	
FYS 100	First Year Seminar	
GNED 100	Adult Academic Success Seminar	
GNED 199	New Student Seminar	
HPEM 199	Freshman Seminar in Health and Physical Education	
IDS 155	Pathways to Adult Learning	
JUST 199	New Student Seminar	
MATH 102	New Student Experience for Mathematical Sciences	
MUGN 199	Freshman Seminar for Music Majors	
NURS 199	Introduction to Nursing	
POLS 199	Freshman Seminar in Political Science and Law	

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
Foundations		
Effective Writing I		
Complete one Effective Writing I course.		3
Effective Writing II		
Complete one Effective Writing II course.		3
Interactive Communication		
Complete one Interactive Communication course.		3
Quantitative Reasoning		
Fulfilled by AMAT 120 or MATH 122 in the major.		
Political and Civic Life		
Fulfilled by SASE 210 in the Teacher Education requirements.		
World Language		
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
Exploration		
Complete one course from four different Exploration categories.		6
Analyzing Cultures and Societies		
Creative Expression		
Ethical Inquiry		
Fulfilled by EDFD 200 in the Teacher Education requirements		
Historical Thinking		
Literary and Artistic Analysis		
Scientific Reasoning		
Fulfilled by EAES 101, EAES 105, or EAES 107 in the major.		
Total Credits		**18-21**