

MATHEMATICS (B.S.) (COMBINED B.S./M.A.T. TEACHING WITH TEACHER CERTIFICATION IN GRADES K-6 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 elementary education (K-6) 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 website (<https://www.montclair.edu/center-of-pedagogy/>) for the required undergraduate professional sequence of courses, overall course outline, and other important Program requirements, guidelines and procedures. Students are also 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	15-18
	Major Requirements	44
	Teacher Education Program Requirements	51
	Free Electives	9-6
	Total Credits	120

Major Requirements

Requirements for the graduate portion of this combined program can be found here (<http://catalog.montclair.edu/programs/teaching-teacher-certification-grade-k-6-students-disabilities-combined-ba-mat/>).

Code	Title	Credits
Mathematics Core		
MATH 122	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
MATH 225	Linear Algebra	4
MATH 340	Probability	3
Mathematics Specialization		
MATH 320	Transitions to Advanced Mathematics	3
MATH 350	College Geometry	3
MATH 433	Theory of Numbers	3
MTHM 201	Mathematics in Elementary Schools I (Course credit counts in the Teacher Education sequence)	
MTHM 302	Mathematics in Elementary Schools II (Course credit counts in the Teacher Education sequence)	
Mathematics Electives		
Select 9 credits from the list (see below)		9
Mathematics Collateral Requirement		
CSIT 111	Fundamentals of Java Programming	3
Select one of the following:		4
ANTH 101	Physical Anthropology	
BIOL 100	Biological Sciences	
BIOL 110	The Biology of Human Life	
CHEM 100	Introductory Chemistry	
EAES 101	Planet Earth	
EAES 105	Physical Geology	
EAES 107	Earth and the Environment	
EAES 201	Understanding Weather and Climate	
EAES 240	Earth System History	
EAES 250	Introduction to Marine Sciences	
Total Credits		44

Mathematics Electives

Complete 9 semester hours from the following:

Code	Title	Credits
AMAT 262	Mathematics of Finance I	3
MATH 271	Special Topics in Modern Mathematics	3
MATH 323	Complex Variables	3
MATH 325	Ordinary Differential Equation	4
AMAT 362	Mathematics of Finance II	3
MATH 398	Vector Calculus	3
MATH 421	Partial Differential Equations	3
MATH 425	Advanced Calculus I	3
MATH 426	Advanced Calculus II	3
MATH 431	Foundations of Modern Algebra	3
MATH 485	Applied Combinatorics and Graph Theory	3
MATH 487	Introduction to Mathematical Cryptography	3
MATH 490	Honors Seminar	3

MATH 491	Research in Mathematics Education	3
MATH 495	Special Topics in Advanced Undergraduate Mathematics	1-3
MATH 497	Mathematics Research I	1-3
MATH 498	Mathematics Research II	1-3
PHYS 368	Fluid Mechanics	3
STAT 330	Fundamentals of Modern Statistics I	4
STAT 341	Statistical Computing	3
STAT 442	Fundamentals of Modern Statistics II	3
STAT 443	Theory of Statistics	3
STAT 481	Introduction to Statistical Data Mining	3
STAT 487	Statistical Genomics	3
STAT 495	Special Topics in Statistical Science	3
STAT 497	Statistical Science Research I	1-3

Fulfilled by MATH 122 in the major.

Political and Civic Life

Fulfilled by ECEL 200 in the co-major.

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: 3

Analyzing Cultures and Societies

Fulfilled by PSYC 101 in the co-major.

Creative Expression

Ethical Inquiry

Historical Thinking

Literary and Artistic Analysis

Fulfilled by READ 209 in the co-major.

Scientific Reasoning

Fulfilled by CSIT 104 in the major.

Total Credits **15-18**

Teacher Education Program Requirements

Teacher Education Program Requirements for Combined Degree Programs with Grades K-6 and Teacher of Students with Disabilities Certification (<http://catalog.montclair.edu/programs/combined-bx-mat-teacher-education-program-requirements-k6-tsd/>)

New Student Seminar

Code	Title	Credits
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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
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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
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Foundations

Effective Writing I

Complete one Effective Writing I course.	3
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Effective Writing II

Complete one Effective Writing II course.	3
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Interactive Communication

Complete one Interactive Communication course.	3
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Quantitative Reasoning