

# TEACHING, WITH TEACHER CERTIFICATION IN MATHEMATICS (PRESCHOOL- GRADE 12) (M.A.T.)

Students with a baccalaureate degree and interest in teaching may pursue the Post-BA program for certification only **or** the Master of Arts in Teaching (MAT) which simultaneously leads to certification **and** Master's Degree. The content area program is open to students who wish to teach one of the following content areas in K-12 schools:

- Art
- Biology
- Chemistry
- Earth Science
- English
- French
- Health & Physical Education
- Mathematics
- Music
- Physical Science
- Physics
- Social Studies
- Spanish
- Teacher of English as a Second Language

Montclair State University's Teacher Education Program is one of the most highly-regarded teacher preparation programs in the country. It has been consistently recognized both nationally and regionally for its unique features, including its structure, partnerships, and curricular emphases. The program is considered a model for other colleges and universities and has continuously been accredited by the National Council for the Accreditation of Teacher Education (NCATE) since 1954.

The Teacher Education Program's professional course sequence and field experiences emphasize teaching for critical thinking and culturally responsive teaching. The professional component for both graduate students addresses four broad areas:

1. Student development and learning
2. The classroom and the school
3. The curriculum
4. Effective teaching skills

## Program Requirements

Code	Title	Credits
<b>Additional Requirements for State Certification</b>		
<i>Speech</i>		
CMST 101	Fundamentals of Speech: Communication Requirement	3
<i>Physiology and Hygiene</i>		
Pass the MSU Health Knowledge Test available through the COP or have UG equivalent course approved by advisor.		
<i>Educational Psychology</i>		

PSYC 560	Advanced Educational Psychology	3
<b>Program Requirements - Graduate Professional Sequence</b>		
<i>Introductory Sequence</i>		
SASE 505	Teaching, Democracy, and Schooling	3
SASE 518	Technology Integration in the Classroom	1
<i>Diversity and Instructional Sequence</i>		
SASE 509	Sociocultural Perspectives on Curriculum and Assessment	3
SASE 516	Meeting the Needs of English Language Learners	1
SASE 517	Inclusive Classrooms in Middle and Secondary Schools	1
SASE 519	Assessment for Authentic Learning	3
READ 501	Techniques of Reading Improvement in the Secondary School	3
<i>Teaching Methods</i>		
Select from the list below according to subject area:		3-6
<i>Pedagogical Sequence I</i>		
SASE 526	Seminar in Inclusive Pedagogies	3
SASE 527	Clinical Practice I	3
<i>Pedagogical Sequence II</i>		
SASE 529	Clinical Practice II	6
SASE 543	Advanced Seminar in Inclusive Pedagogies	3
<b>Comprehensive Examination</b>		
In the term that you will sit for exam, register for the section which matches your major & advisor. Successfully pass exam.		
GRAD CMP	Comprehensive Examination	
<b>Total Credits</b>		<b>39-42</b>

## Teaching Methods

Code	Title	Credits
Select course(s) according to subject area:		
<i>Art</i>		6
ARED 511	Foundations of Methods and Curriculum in Art Education I: P-12	
ARED 512	Foundations of Methods and Curriculum in Art Education II: P-12	
<i>Biological Science, Earth Science, Physics or Physical Science</i>		4
SASE 502	Teaching Science in Secondary Schools	
<i>Chemistry</i>		3
CHEM 501	Teaching Chemistry in the Secondary School	
<i>English</i>		4
ENGL 571	Teaching Methods (Secondary English)	
<i>Teaching English as a Second Language</i>		3
APLN 525	Methodology of Teaching ESL	
<i>French</i>		6
FREN 502	Theories and Approaches to Teaching French as a Second Language	
FREN 519	Teaching French in P-12: Practice	
<i>Mathematics</i>		4
MATH 519	Teaching Mathematics	
<i>Music</i>		6
MUED 556	Teaching Methods for the Elementary Music Class	
MUED 557	Teaching Methods for Music in the Secondary Schools	

<i>Social Studies</i>		3
SASE 501	Graduate Methods of Teaching Social Studies	
<i>Spanish</i>		3
SPAN 518	Teaching Spanish in K-12	

## Subject Matter Preparation

Code	Title	Credits
<i>Mathematics Courses</i>		
CSIT 111	Fundamentals of Programming I	3
MATH 122	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
MATH 225	Linear Algebra	4
MATH 340	Probability	3
MATH 350	College Geometry	3
MATH 431	Foundations of Modern Algebra	3
<i>Mathematics Electives</i>		
Select two of the following:		6
MATH 271	Special Topics in Modern Mathematics	
MATH 323	Complex Variables	
MATH 325	Ordinary Differential Equation	
MATH 364	Operations Research I	
MATH 369	Mathematical Modeling	
MATH 425	Advanced Calculus I	
MATH 426	Advanced Calculus II	
MATH 433	Theory of Numbers	
MATH 450	Foundations of Geometry	
MATH 451	Topology	
MATH 463	Numerical Analysis	
MATH 465	Operations Research II	
MATH 485	Applied Combinatorics and Graph Theory	
MATH 490	Honors Seminar	
MATH 495	Special Topics in Advanced Undergraduate Mathematics	
MATH 497	Mathematics Research I	
MATH 498	Mathematics Research II	
MATH 574	Problem Analysis in Secondary Mathematics	
MATH 575	Special Topics in Mathematics Education	
MTHM 579	Applied Mathematics for the Middle Schools	
STAT 443	Theory of Statistics	
<b>Total Credits</b>		<b>34</b>