

TEACHING, WITH TEACHER CERTIFICATION IN PHYSICAL SCIENCE (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
Additional Requirements for State Certification		
<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
Program Requirements - Graduate Professional Sequence		
<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
Comprehensive Examination		
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	
Total Credits		39-42

Teaching Methods

Code	Title	Credits
Select course(s) according to subject area:		
<i>Art</i>		
ARED 511	Foundations of Methods and Curriculum in Art Education I: P-12	6
ARED 512	Foundations of Methods and Curriculum in Art Education II: P-12	
<i>Biological Science, Earth Science, Physics or Physical Science</i>		
SASE 502	Teaching Science in Secondary Schools	4
<i>Chemistry</i>		
CHEM 501	Teaching Chemistry in the Secondary School	3
<i>English</i>		
ENGL 571	Teaching Methods (Secondary English)	4
<i>Teaching English as a Second Language</i>		
APLN 525	Methodology of Teaching ESL	3
<i>French</i>		
FREN 502	Theories and Approaches to Teaching French as a Second Language	6
FREN 519	Teaching French in P-12: Practice	
<i>Mathematics</i>		
MATH 519	Teaching Mathematics	4
<i>Music</i>		
MUED 556	Teaching Methods for the Elementary Music Class	6
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>Calculus-based Introductory Physics I and II</i>		
PHYS 191	University Physics I	4
PHYS 192	University Physics II	4
<i>Intermediate Mechanics</i>		
PHYS 210	Intermediate Mechanics	3
<i>Oscillations, Waves, and Optics</i>		
PHYS 220	Oscillations, Waves, and Optics	3
<i>Intermediate and Advanced Physics Laboratories</i>		
PHYS 230	Intermediate Physics Laboratory	4
PHYS 330	Advanced Physics Laboratory	4
<i>Statistical and Thermal Physics</i>		
PHYS 320	Statistical and Thermal Physics	3
<i>Electricity and Magnetism</i>		
PHYS 340	Electricity and Magnetism	3
<i>Modern Physics or Quantum Mechanics</i>		
PHYS 360	Modern Physics	3
or PHYS 464	Quantum Mechanics	
<i>Mathematics</i>		
MATH 122	Calculus I	4
or AMAT 120	Applied Calculus A	
MATH 221	Calculus II	4
or AMAT 220	Applied Calculus B	
MATH 222	Calculus III	4
<i>Introductory Chemistry</i>		
CHEM 120	General Chemistry I	4
CHEM 121	General Chemistry II	4
<i>Organic Chemistry</i>		
CHEM 230	Organic Chemistry I	3
CHEM 232	Experimental Organic Chemistry I	2
<i>Additional Chemistry or Biochemistry Course</i>		
Complete one 2-3 credit Chemistry or Biochemistry course.		2-3
Total Credits		74-75