Master of Arts in Teaching Mathematics

Director of Mathematics Education
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Degree Awarded
Master of Arts in Teaching Mathematics

Website
http://www.stonybrook.edu/spd/graduate/matmath.html

Master of Arts in Teaching Mathematics

This program is designed as a course of study leading to New York State certification for teaching Mathematics in the secondary schools (grades 7-12), with an extension option for grades 5-6. This program, offered in collaboration with the School of Professional Development, the University's Department of Mathematics and the Professional Education Program, is designed for those who have little or no previous coursework in education or formal classroom teaching experience.

Master of Arts in Teaching Mathematics Admissions

A. Application essay.

B. Graduate Record Examination (GRE) General Test scores.

C. A bachelor’s degree in Mathematics, Applied Mathematics or the equivalent (see below) with a minimum of 36 credits in Mathematics* with a minimum cumulative GPA of 2.75 and a minimum GPA of 3.0 in all Mathematics studies.

D. One year of college-level study of a foreign language with a grade of “C” or better (this may include American Sign Language).

E. Three letters of recommendation. Two of the three recommendations must be from faculty with whom you have completed a course of study at the college level. It would be preferable that these faculty be in the area of your major.

F. In those cases where the departmental admissions committee deems it desirable, personal interviews with departmental representatives may be necessary.

*These 36 credits must include courses in single and multivariable calculus, linear algebra, and at least two of the following four more advanced subjects: abstract and/or applied algebra; analysis or advanced calculus; geometry, including non-Euclidean geometry; probability and/or statistics. You must also have taken at least one mathematics course that significantly uses computers and/or graphing calculators.

Requirements for the MAT in Mathematics

The degree program consists of 45 credits, distributed among the areas listed below. Unless otherwise noted, each course is three credits. All degree requirements must be completed within five (5) years from the semester date of admission as a matriculated student.

1. MATHEMATICS CONTENT COURSES

   12 credits.

   Course selection will be determined by the student and advisor. Students who have academic deficiencies in Mathematics will be required to include courses that specifically address these deficiencies. These courses will be part of the 12 credits selected to satisfy this requirement. If additional deficiencies exist, those credits required to meet these mandates will be over and above those requirements for the degree.

   MAT 511 Fundamental Concepts of Mathematics (Required of all students in this program)

   Plus nine additional credits selected from the following:

    AMS 504 Foundations of Applied Mathematics
    AMS 507 Introduction to Probability
    AMS 572 Data Analysis I
    MAT 512 Algebra for Teachers
    MAT 513 Analysis for Teachers I
    MAT 514 Analysis for Teachers II
    MAT 515 Geometry for Teachers
    MAT 516 Probability & Statistics for Teachers
    MAT 530 Topology/Geometry I
    MAT 534 Algebra I
MAT 542 Complex Analysis I
MAT 544 Analysis
MAT 550 Real Analysis I
MAT 599 Masters Level Independent Study

2. PROFESSIONAL STUDIES IN EDUCATION - 27 credits
CEE 505 Education: Theory and Practice
CEF 547 Principles and Practices of Special Education
PSY 595 Human Development
LIN 544 Language Acquisition and Literacy Development
MAE 501 Foundations of the Secondary School Mathematics Curriculum
MAE 510 Introduction to Methods of Teaching & Learning Standards (co- or prerequisite: MAE 501)
MAE 520 Advanced Methods of Teaching Secondary School Mathematics (prerequisites: MAE 501 and MAE 510)
MAE 530 Directed Readings in Mathematics Education (1 credit course; prerequisites: MAE 510 & MAE 520; co-requisite: MAE 540)
MAE 540 Clinical Experience (2 credits; prerequisites: MAE 510 & MAE 520; co-requisite: MAE 530)
MAE 554 Student Teaching Seminar (co-requisites MAE 551 & MAE 552; prerequisites CEE 505, CEE 565, LIN 544, MAE 501, MAE 510, MAE 520, MAE 530, MAE 540; satisfaction of all content requirements and permission of the Director of Mathematics Education)

3. SUPERVISED STUDENT TEACHING - 6 credits
MAE 551 Supervised Student Teaching Middle School Grades 7 - 9: Mathematics (co-requisites MAE 552 & MAE 554; prerequisites CEE 505, CEE 565, LIN 544, MAE 501, MAE 510, MAE 520, MAE 530, MAE 540; satisfaction of all content requirements and permission of the Director of Mathematics Education)
MAE 552 Supervised Student Teaching High School Grades 10 - 12: Mathematics (co-requisites MAE 551 & MAE 554; prerequisites CEE 505, CEE 565, LIN 544, MAE 501, MAE 510, MAE 520, MAE 530, MAE 540; satisfaction of all content requirements and permission of the Director of Mathematics Education)

4. WRITTEN PROJECT
Students in all degree programs will be required to complete a four-week foreign language teaching module specifically designed for the Supervised Student Teaching project.

TEACHER CERTIFICATION
The Master of Arts in Teaching is a New York State registered and approved program that qualifies students for license upon successful degree completion. Students must complete all courses required for the MAT and must receive a grade of B or better in all pedagogy and foundation courses as well as an overall GPA of 3.0 or better in all course work attempted while matriculated in a graduate teacher preparation program.

In addition, all teacher preparation candidates must be fingerprinted and must also complete certification workshops in:

- Child Abuse
- Dignity for All Students Act (DASA)
- School Violence (Project Save)

See Certification and Licensing Workshops for details and schedules.

All students will have to complete the ALST (Academic Literacy Skills Test), Educating All Students Test, and the revised CST (Content Specialty Test) in the area of the Certificate. It is the student’s responsibility to monitor the TEACH website at http://www.highered.nysed.gov/tcert/ to ensure that they are taking the appropriate examinations. All students are required to complete and submit the edTPA (Education-Teacher Performance Assessment - Portfolio) in their content field. Students should check with the program director for specific requirements.

 Faculty
Program faculty are drawn from the Department of Mathematics, as well as from the Professional Education Program.

NOTE: The course descriptions for this program can be found in the corresponding program PDF or at COURSE SEARCH.