

## SCHOOL OF GRADUATE STUDIES

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### MASTER OF ARTS IN TEACHING (MAT) MATHEMATICS

#### Objectives

The Master of Arts in Teaching (MAT) Mathematics, a 36 credit program, is for those wishing to prepare for initial license in secondary mathematics or for practicing mathematics teachers who wish to earn a degree that increases their formal education in mathematics and pedagogy.

#### Admissions

Visit [salemstate.edu/graduate](http://salemstate.edu/graduate) for admissions requirements and deadlines.

Prerequisites for this program include a course in adolescent psychology.

It may be possible to take a limited number of courses prior to formal admission to the program. If you are interested in this option, please contact the graduate program coordinator. If you are accepted into the program, you must meet with the graduate program coordinator to develop a tentative plan of study and discuss any transfer credits. Graduate program coordinator contact information may be found at [salemstate.edu/graduate/programs](http://salemstate.edu/graduate/programs).

#### Program Requirements

The School of Graduate Studies is currently revising this program to bring it into alignment with new Massachusetts licensure regulations. The information on this sheet will serve only as general guidelines.

All candidates must complete

- a minimum of 36 credit hours of graduate course work (described below)

#### Course Requirements

Education Core Courses	9
<ul style="list-style-type: none"><li>• EDU 808 The American High School</li><li>• EDG 705 Responding to Diversity In the Classroom</li><li>• EDU 709 Instruction and Assessment in the Secondary Classroom</li></ul>	
Content Based Methods Course	
<ul style="list-style-type: none"><li>• MAT 702N Research on Teaching Methods in Mathematics I</li></ul>	3
Subject Matter Specialty Courses	12
Four mathematics courses, of which at least three are chosen from the core courses listed below. The remaining course may be selected from the core course list or from mathematics electives approved by your program coordinator.	

### Core Courses

- MAT 704 Linear Algebra
- MAT 705 Modern Plane Geometry
- MAT 706 Theory of Numbers
- MAT 707 Mathematical Statistics
- MAT 711 Real Analysis I
- MAT 713 Ordinary Differential Equations
- MAT 714 Algebraic Structures
- MAT 723 Numerical Analysis
- MAT 740 Computer Applications in Mathematics I

### Research Component (choose two)

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- MAT 703 Research on Teaching Methods in Mathematics II
- MAT 710 Foundations of Mathematics
- MAT 747 Applied Statistical Inference
- MAT 750 History of Mathematics
- MAT 807 Statistical Inference

Students taking this course for the MAT in Mathematics degree will do a research project involving successful methods of teaching mathematics.

### Practicum Experience

- EDU 925MP Practicum in Teaching Mathematics (8-12) 3
- EDU 925MS Practicum Seminar in Teaching Mathematics (8-12) 3

Candidates who already have an initial license (or are not seeking one) replace the practicum with two education or mathematics electives approved by the program coordinator.

### Total Credits

36

### Notes

Because the Commonwealth of Massachusetts may change educator licensure requirements, you are advised to contact the Department of Elementary and Secondary Education for specific, current licensure requirements. This information may be accessed at [doe.mass.edu](http://doe.mass.edu).

The School of Graduate Studies reserves the right to make changes in program and course requirements, policies and regulations as circumstances dictate. There is no guarantee that any listed course will be offered in any given semester. Therefore, you should meet regularly with your program coordinator to discuss your progress and revise your plan of study as needed.