

## SCHOOL OF GRADUATE STUDIES

352 Lafayette Street, Salem, MA 01970-5353

978.542.6323  
salemstate.edu/graduate  
graduate@salemstate.edu

### MASTER OF SCIENCE (MS) IN MATHEMATICS

#### Objectives

The Master of Science (MS) in Mathematics is intended to provide a sound foundation for further graduate study at the doctoral level, for teaching at the secondary, junior college or college level, and for careers in industry, research and commerce.

#### Admissions

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

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

All candidates must complete

- 30 credit hours of mathematics courses; at least nine credits must be from level II courses

#### Course Requirements

##### Course Offerings

• MAT 701	Vector and Tensor Analysis	3
• MAT 704	Linear Algebra	3
• MAT 705	Modern Plane Geometry	3
• MAT 706	Theory of Numbers	3
• MAT 707	Mathematical Statistics	3
• MAT 708	Introduction to Cryptography	3
• MAT 709	Complex Variables	3
• MAT 710	Foundations of Mathematics	3
• MAT 711	Real Analysis I	3
• MAT 713	Ordinary Differential Equations	3
• MAT 714	Algebraic Structures	3
• MAT 737	Operations Research	3
• MAT 740	Computer Methods in Mathematics I	3
• MAT 750	History of Mathematics	3

## Level II Courses

• MAT 712	Topology I	3
• MAT 715	Topics in Modern Geometry	3
• MAT 716	Analytic Number Theory	3
• MAT 721	Real Analysis II	3
• MAT 723	Numerical Analysis	3
• MAT 724	Abstract Algebra	3
• MAT 725	Fractal Geometry	3
• MAT 731	Measure and Integration	3
• MAT 734	Linear and Multilinear Algebra	3
• MAT 741	Computer Methods in Mathematics II	3
• MAT 747	Applied Statistical Inference	3
• MAT 801	Differential Geometry	3
• MAT 804	Advanced Topics in Algebra	3
• MAT 807	Statistical Inference	3
• MAT 809	Theory of Functions of a Complex Variable	3
• MAT 812	Topology II	3
• MAT 813	Partial Differential Equations and Fourier Series	3
• MAT 816	Algebraic Number Theory	3
• MAT 821	Functional Analysis	3
• MAT 822	Introduction to Algebraic Topology	3
• MAT 831	Manifolds and Differential Forms	3
• MAT 930	Seminar: Independent Study	3

Total Credits 30

## Notes

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.