

# MATHEMATICS EDUCATION (7–12; M.S.ED.)

## Master of Science in Education Program

Program Code: MSED-AS

Major Code: MTS

## Mathematics Department

SAMC 159 (716) 878-5621

[mathematics.buffalostate.edu/](http://mathematics.buffalostate.edu/) (<http://mathematics.buffalostate.edu/>)

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Accredited: Council for the Accreditation of Educator Preparation (CAEP) (formerly NCATE)

**Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs (<http://ecatalog.buffalostate.edu/graduate/admission-graduate-program/admission-all-education-programs/>)" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.**

This program is designed to develop, enhance, and extend the content knowledge and professional competencies of secondary mathematics teachers.

Candidates should consult the Teacher Certification website for current seminars and workshops. <https://teachercertification.buffalostate.edu/seminars-and-workshops> (<https://teachercertification.buffalostate.edu/seminars-and-workshops/>)

## Admission Requirements

1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 3.0 (4.0 scale) in all undergraduate mathematics courses.
2. Completion of at least 18 credit hours beyond calculus, including one semester of linear algebra or abstract algebra, one semester of geometry, and at least one semester of analysis, discrete mathematics, calculus-based probability, or calculus-based statistics. Those with minor deficiencies may enter the premajor program with written permission from the Mathematics Department chair; a copy of this statement will be filed in the Mathematics Department Office and the Graduate School.
3. Acceptance as a graduate student by the department chair and the director of the Graduate Studies Office.
4. Initial Certificate in Mathematics 7-12.

In addition, all applicants should review the Admission to a Graduate Program (<http://ecatalog.buffalostate.edu/graduate/admission-graduate-program/>) section in this catalog.

## Program Requirements

Code	Title	Credit Hours
<b>Mathematics Courses (12-15 credit hours)</b>		
Select from the following:		12-15
MAT 501	MATH FOR TEACHERS: ALGEBRA	
MAT 521	MATH FOR TEACHERS: GEOMETRY	
MAT 581	MATHEMATICS FOR TEACHERS: PROBABILITY AND STATISTICS	
MAT 601	TOPICS IN MODERN ALGEBRA I	
MAT 611	TOPICS IN REAL ANALYSIS <sup>1</sup>	
MAT 620	MODERN GEOMETRY:SELECTED TOPICS	
MAT 631	FOUNDATIONS OF MATHEMATICS	
MAT 651	THEORY OF NUMBERS	
MAT 670	DISCRETE MATHEMATICS AND FOUNDATIONS OF COMPUTER SCIENCE	
MAT 681	INTERMEDIATE PROBABILITY	
MAT 683	STATISTICAL THEORY	
MAT 696	HISTORY OF MATHEMATICS	
MAT 699	SELECTED ADVANCED TOPICS	
MAT 701	MODERN ALGEBRA I	
<b>Mathematics Education Courses (6-9 credit hours)</b>		
Select from the following:		6-9
MED 601	SEMINAR IN THE TEACHING OF MATHEMATICS	
MED 602	MATHEMATICS FOR THE SECONDARY SCHOOL TEACHER: SELECTED TOPICS	
MED 604	TEACHING OF GEOMETRIC CONCEPTS	
MED 605	TEACHING OF ALGEBRAIC CONCEPTS	
MED 606	LOGO AND MATHEMATICS LEARNING	
MED 607	TECHNOLOGY IN MATHEMATICS EDUCATION	
MED 683	PROBLEM SOLVING AND PROBLEM POSING	

<b>Curriculum and Research Courses (6 credit hours)</b>		
MED 595	RESEARCH METHODS AND TECHNIQUES IN MATHEMATICS EDUCATION	3
MED 600	CONTEMPORARY MATHEMATICS CURRICULUM DEVELOPMENT	3
<b>Master's Project or Master's Thesis (3-6 credit hours)</b>		
MED 690 or MED 795	MASTER'S PROJECT MASTER'S THESIS IN MATHEMATICS EDUCATION	3-6
<b>Total Credit Hours</b>		<b>30</b>

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Required if not part of student's undergraduate program.