MATHEMATICS EDUCATION (7–12, B.S.)

Bachelor of Science Program
Program Code: BS-AS
Major Code: MTS

Mathematics Department
SAMC 159
(716) 878-5621
mathematics.buffalostate.edu/ (http://mathematics.buffalostate.edu/)

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" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

Professional Licensure: This program leads to a recommendation for NYS certification; please check for certification requirements in all other states **(**https://academicaffairs.buffalostate.edu/professional-licensure-disclosures/**)**

The B.S. in mathematics with adolescent certification is directed to a career goal of teaching. This program includes the course requirements leading to New York State certification to teach mathematics in grades 7–12.

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

SUNY has a standard admissions requirement of a 3.0 GPA for entry into an educator preparation program at the undergraduate or graduate level or a rank in the top 30th percentile of the high school class for entry into an undergraduate educator preparation program as a first-year student.

For first-year students, four years of college preparatory mathematics is recommended; top 30th percentile or an 85% high school average; submission of ACT or SAT score.

Transfer students with a 3.0 GPA from either their last college or the combined average of all previous colleges, whichever is higher, will be admitted directly into Mathematics Education (BS-AS MTS).

Students who do not meet admissions requirements will be admitted into the Mathematics (BA-AS MAT) major.

Program Requirements

Code	Title	Credit Hours
General Education 23 Requirements **(**http://ecatalog.buffalostate.edu/undergraduate/collegewide-degree-requirements-baccalaureate-degrees/#IF_Courses**)**		
33 credit hours		33
Mathematics Major Requirements (39 credit hours)		
Required Courses (33 credit hours)		
MAT 161	CALCULUS I [1]	4
MAT 162	CALCULUS II	4
MAT 202	INTRODUCTION TO LINEAR ALGEBRA	3
MAT 263	CALCULUS III	4
MAT 300	TECHNIQUES OF PROOF	3
MAT 301	INTRODUCTION TO GROUP THEORY	3
MAT 322	MODERN GEOMETRY	3
MAT 325	PROBABILITY AND STATISTICS	3
MAT 351	ELEMENTARY THEORY OF NUMBERS	3
MAT 417	INTRODUCTION TO REAL ANALYSIS I	3
Electives (6 credit hours)		
Select two from the following:		6
MAT 302	ABSTRACT ALGEBRA II	
MAT 309	COMBINATORICS	
MAT 315	DIFFERENTIAL EQUATIONS	
MAT 316	INTERMEDIATE DIFFERENTIAL EQUATIONS	
MAT 319	MATHEMATICAL BIOLOGY	
MAT 366	COMPUTATIONAL TOOLS FOR APPLIED MATHEMATICIANS II	
MAT 370	APPLIED NETWORKS	
MAT 383	APPLIED STATISTICS I	
MAT 404	APPLICATIONS OF LINEAR ALGEBRA	
MAT 411	COMPLEX VARIABLES	
MAT 461	NUMERICAL ANALYSIS	
MAT 490	SEMINAR	
MAT 495	SPECIAL PROJECT	

MAT 499	INDEPENDENT STUDY	
Professional Education Requirements (30 credit hours)		
SPF 303	EDUCATIONAL PSYCHOLOGY: MIDDLE AND SECONDARY EDUCATION	3
SPF 403	HISTORICAL AND PHILOSOPHICAL FORCES INFLUENCING SECONDARY EDUCATION	3
EDU 416	TEACHING LITERACY IN MIDDLE AND SECONDARY SCHOOLS	3
EDU 417	ADOLESCENT LITERACY	3
EXE 100	NATURE AND NEEDS OF INDIVIDUALS WITH SPECIAL NEEDS [1]	3
MED 200	FOUNDATIONS OF TEACHING MATHEMATICS 7-12 AND FIELD EXPERIENCE	3
MED 300	FIELD EXPERIENCE: METHODS IN THE TEACHING OF SECONDARY SCHOOL MATHEMATICS	3
MED 307	USES OF TECHNOLOGY IN THE TEACHING OF MATHEMATICS [1]	3
MED 308	METHODS IN THE TEACHING OF SECONDARY SCHOOL MATHEMATICS	3
MED 383	LEARNING AND TEACHING PROBLEM SOLVING	3
Student Teaching Requirements (12 credit hours)		
MED 407	STUDENT TEACHING OF MATHEMATICS IN JUNIOR HIGH/MIDDLE SCHOOL [1]	6
MED 408	STUDENT TEACHING OF MATHEMATICS IN HIGH SCHOOL [1]	6
All College Electives		
6 credit hours		6
Total Credit Hours		**120**

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Fulfill General Education 23 requirement.

Students will:

1. demonstrate content knowledge in secondary mathematics.
2. demonstrate ability to plan instruction.
3. Demonstrate effect on student learning.