

MATHEMATICS EDUCATION PREPARATION 7-12, MS

Contacts

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Faculty

Nicole Fonger, Duane Graysay, Joanna Masingila

The School of Education, in cooperation with the Department of Mathematics, in the College of Arts and Sciences, offers a program that prepares students to become mathematics teachers in grades 7-12 who are proficient in five areas:

- critical reflection and explanations of practice,
- content knowledge,
- inclusive and culturally relevant pedagogy,
- assessment of student learning and development of mathematical literacy, and
- professional conduct and collaboration.

This Master of Science (M.S.) program is designed for students who have attained a bachelor's degree with a major in mathematics or its equivalent, and who seek initial New York State certification to teach mathematics in grades 7-12. It aligns with the professional standards of the National Council of Teachers of Mathematics and the New York State Teaching and Learning Standards. Full time study is required.

This program is not suitable for students who already have met requirements for initial certification to teach grades 7-12. Those already meeting certification requirements may wish to consider the master's degree program in Teaching and Curriculum with an emphasis in mathematics education. General program information is available in this catalog. More details about the mathematics education emphasis are available from the faculty contact above.

Student Learning Outcomes

1. Acquire knowledge of each student, and demonstrate knowledge of student development and learning to promote achievement for all students
2. Know the content they are responsible for teaching, and plan instruction that ensures growth and achievement for all students
3. Implement instruction that engages and challenges all students to meet or exceed the learning standards
4. Work with all students to create a dynamic learning environment that supports achievement and growth
5. Use multiple measures to assess and document student growth, evaluate instructional effectiveness, and modify instruction
6. Demonstrate professional responsibility and engage relevant stakeholders to maximize student growth, development, and learning
7. Set informed goals and strive for continuous professional growth

Master's Degree Course Requirements

The program requires 30-38 credits, and may be completed in 15 months, beginning in May. Students who enter with education study equivalent

to one of the courses below may have their syllabi reviewed for waiver of courses. In no case will graduate credits required be below 30.

(courses with * include field experience)

Entering Summer		Credits
EDU 606	Understanding Learning and Teaching (*)	4
ELL 645	Issues in Educating English Language Learners	3
RED 625	Literacy Across the Curriculum (*)	4
Credits		11
Fall		
Candidacy Semester		
SED 613	Methods and Curriculum in Teaching	3
SPE 612	Adapting Instruction for Diverse Student Needs	3
EDU 508	Student Teaching (*)	3
Mathematics Course		3
Safe and Healthy Learning Environments, which includes the following topics: Identifying/reporting child abuse, violence prevention, child abduction prevention, highway/general safety, alcohol/drug/tobacco prevention, fire and arson prevention, and training related to the Dignity for All Students (DASA) Act.		
Credits		12
Spring		
Standard Student Teaching Semester		
EDU 508	Student Teaching (*)	6
EDU 516	Equitable Assessment for Inclusive Classrooms	3
Credits		9
Summer 2		
Mathematics course		3
Mathematics education course		3
Credits		6
Total Credits		38

Intensive Examination

A master's degree intensive examination is also required.

Mathematics Education Preparation 7-12 Content Requirements

In addition to the graduate courses listed above, this program requires either an undergraduate degree in Mathematics or a degree in another area with 30 hours of Mathematics content. Typically, a 3.0 average in these courses is required.

It is expected that students will enter the program with most of these requirements completed. Students who do not complete all of the requirements cannot be recommended for certification.

Also Required

Workshops in violence prevention, child abuse and abduction, substance abuse, the Dignity for All Students Act (DASA), and school and fire safety.

As a culminating experience, students complete a portfolio demonstrating evidence of professional competence.