



# Elementary and Middle Level Mathematics Education, M.S. *master*

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Required Credits: 34

Required GPA: 3.00

## I. REQUIRED EDUCATION CORE

Complete the following courses:

- ED 6100 Educational Research I (3 credits)
- ED 6107 Advanced Educational Psychology (3 credits)
- MATH 6050 Assessment in the Mathematics Classroom (3 credits)

## II. REQUIRED MATHEMATICS ELECTIVE COURSES

Complete the following courses:

- MATH 6061 Number Sense For Teachers (3 credits)
- MATH 5064 Number Concepts (4 credits)  
or MATH 6062 Number Theory For Teachers (3 credits)

Select at least 5 courses from the following:

- MATH 5065 Mathematical Foundations of Algebra (4 credits)
- MATH 5066 Geometry and Technology (4 credits)
- MATH 5067 Data, Probability, and Statistics (4 credits)
- MATH 6200 Structures of Discrete Mathematics (3 credits)
- MATH 6500 Geometry In The Classroom For Teachers (3 credits)
- MATH 6600 Probability For Teachers (3 credits)

## III. REQUIRED PORFOLIO AND RESEARCH

Note: MATH 6050 should be taken prior to the collection of evidence for the pedagogical portfolio.

Note: Consult with advisor before registering for MATH 6055.

Complete the following courses:

- MATH 6055 Pedagogical Portfolio and Action Research (2 credits)

### Program Learning Outcomes | Elementary and Middle Level Mathematics Educations, M.S.

1. Knowledge: Students will gain an in depth understanding of mathematics content appropriate for elementary and middle level teachers.

2. Pedagogy: Students will develop an understanding of the uses and limitations of a variety of instructional methodologies.

3. Curricular Design: Student will design lessons and curriculum that communicate mathematical concepts to learners with diverse learning styles and ability levels.

4. Research: Students will gain a understanding of the literature and use that understanding to answer research questions in a specialized area of mathematics education.

5. Professional Advancement: Students will apply what they have learned to improve the learning of their students and enhance the mathematics curriculum at their schools.