



# Mathematics Education, M.S. *master*

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## COMPETENCY REQUIREMENT

Required Credits: 32  
Required GPA: 3.00

Completion of MATH 6050, Assessment in the Mathematics Classroom, with a grade of 'B' or better, or the equivalent as approved by the department.

### 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

Select at least 12 credits from the following:

Note: Some courses listed have prerequisites not required in this program.

Other math content courses may be used with consent of advisor.

- MATH 5240 Number Theory (3 credits)
- MATH 5260 Mathematical Problem Solving (3 credits)
- MATH 5310 Linear Algebra (4 credits)
- MATH 5371 Modern Algebra (3 credits)
- MATH 5410 Introduction to Analysis (3 credits)
- MATH 5440 Introduction to Fractals & Chaos (3 credits)
- MATH 5470 Advanced Calculus (3 credits)
- MATH 5560 Classical and Modern Geometry (3 credits)
- MATH 5710 Mathematical Modeling (3 credits)
- MATH 5720 Numerical Methods (3 credits)
- MATH 5760 Topics in Applied Mathematics (3 credits)
- MATH 5820 History of Mathematics (3 credits)
- MATH 6350 Advanced Abstract Algebra (3 credits)
- MATH 6550 Advanced Geometry (3 credits)
- STAT 5631 Probability and Statistics I (4 credits)
- STAT 5632 Probability and Statistics II (3 credits)
- STAT 5650 Probability and Statistics for Secondary Teachers (4 credits)
- STAT 5660 Statistics for the Health Sciences (3 credits)

### III. REQUIRED MATHEMATICS PEDAGOGY ELECTIVE COURSES

Select at least 9 credits from the following (or other pedagogy courses approved by an advisor):

- MATH 5064 Number Concepts (4 credits)
- MATH 5065 Mathematical Foundations of Algebra (4 credits)
- MATH 5066 Geometry and Technology (4 credits)
- MATH 5067 Data, Probability, and Statistics (4 credits)
- MATH 6061 Number Sense For Teachers (3 credits)
- MATH 6062 Number Theory For Teachers (3 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)

### IV. REQUIRED PORTFOLIO EVALUATION AND RESEARCH

Note: Consult with an advisor before registering for MATH 6055:

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