

Mathematics for the Elementary and Middle Grades (K-8) M.A.

Mathematics for the Elementary and Middle Grades (K-8) Major

This M.A. major is intended for teachers interested in mathematics for the elementary and middle grades (K-8) and for mathematics specialists and supervisors. Teacher licensure is a prerequisite for completing the program approval process for this major. Normally, candidates will have at least 2 years teaching experience.

Students interested in this program must submit a completed Application for Admission to Graduate Study and should refer to their MyUNiverse Student Center To-Do list or contact the Department of Mathematics for other application requirements. Graduate information and application for graduate admission can be found at <https://admissions.uni.edu/application>.

The Graduate Record Examination (General Test) **is not** required for admission to the program.

Only graduate courses (course numbers 5000 or above) will apply to a graduate degree, even if the undergraduate course number (4999 or less) is listed. No exceptions will be made.

This major is available on the **non-thesis** option only; a **minimum of 30 hours** is required. A **minimum of 15 hours of 6000-level course work is required.**

Required

Mathematics Education:		
MATH 6201	Foundations of Mathematics Education	3
MATH 6205	Teaching Rational Numbers and Proportionality	3
MATH 6212	Foundations of Algebraic Reasoning	3
MATH 6215	Foundations of Geometric Reasoning	3
MATH 6381	Current Research in Mathematics Education	3
MATH 6227	Data Analysis, Probability, and Discrete Mathematical Reasoning	3
MATH 6225	Teaching and Learning Mathematics	3
MATH 6236	Equity and Mathematics Education	3
MATH 6216	Number and Operations	3
MATH 6209	Mathematics Curriculum and Assessment	3
Total Hours		30

Learning Outcomes

Mathematics for the Elementary and Middle Grades (K-8), M.A.

In working to develop a productive mathematical disposition for teaching, students will

- Use evidence from teaching to analyze current practices and work to improve future teaching through the following Mathematical Teaching Practices:
 - Establish mathematics goals to focus learning
 - Implement tasks that promote reasoning and problem solving
 - Use and connect mathematical representations
 - Facilitate meaningful mathematical discourse
 - Pose purposeful questions
 - Build procedural fluency from conceptual understanding
 - Support productive struggle in learning mathematics
 - Elicit and use evidence of student thinking.
- Demonstrate proficiency in mathematics oriented toward deepening mathematical knowledge.
- Incorporate mathematics education research and resources (e.g. curriculum, current and emerging technology, manipulatives) into teaching practices.
- Explore equitable teaching practices from theory through implementation.
- Analyze current assessment practices through the lens of current assessment research.

Related Programs

- Mathematics - Teaching B.A.
- Mathematics M.A.