# MATHEMATICS EDUCATION (MSE)

## Curriculum and Instruction - Instructional Leadership

Build advanced expertise in mathematics content and instructional practice with the Math Education concentration within the MSE in Curriculum and Instruction. Designed for licensed mathematics teachers, this program strengthens curriculum design, assessment, and research-based instructional strategies for middle and secondary classrooms. You'll engage with core areas of mathematics including algebra, geometry, discrete mathematics, probability, and statistics, while exploring how students learn mathematical concepts and how content connects across grade levels. Coursework emphasizes problem solving, conceptual understanding, data-informed instruction, and current trends in mathematics education. This program is intended for educators who already hold a mathematics endorsement and are seeking to deepen their specialization or enhance classroom effectiveness through advanced study.

## fast facts

**Degree offered:** Master of Science in Education (MSE) in Curriculum and Instruction – Instructional Leadership / Mathematics Education

**Credit hours:** 36

**Cost per credit hour:** $404 total *(includes $261.90 tuition + $142.10 fees)*

**Delivery method:** Online

**Departments:** Educational Foundations and Leadership; Physical Sciences and Mathematics

**Schools:** Education and Behavioral Sciences; Science, Health, and Criminal Justice

## focus on results

### Skills Learned

- Advanced mathematics content knowledge
- Math curriculum and instructional design
- Classroom assessment and data analysis
- Problem-based and conceptual math instruction
- Probability, statistics, and quantitative reasoning
- Research-informed teaching practices
- Professional collaboration and practice

### Possible Careers

- High school math teacher
- Middle school math teacher
- Mathematics curriculum specialist
- Instructional coach or mentor
- Mathematics department chair
- Math intervention specialist
- Assessment or testing coordinator
- STEM program coordinator

### Types of Employers

- PK–12 school districts
- Charter and alternative schools
- Private and parochial schools
- Educational service units
- State education agencies
- Nonprofit education organizations
- Education consulting firms
- STEM-focused education programs

## recognized for excellence

Our graduate programs are nationally recognized for their excellence, exceptional value, and flexible learning options — consistently earning top distinctions for affordability and quality.

**Most Affordable Online Master's Degrees in the U.S.**
Wayne State College was ranked among the Top 10 most affordable online master's degree programs in the nation by *Intelligent.com* for 2025.

**College of Distinction**
Wayne State College has been recognized as a College of Distinction, an honor that highlights institutions for engaged students, great teaching, a vibrant campus community, and successful outcomes.

# Program courses

2026-27 Academic Year

*The following courses are required for the program of study described on this sheet. Every effort is made to ensure this information is current, but please be aware that some content may have changed. To develop a plan for registering and taking these courses, please consult the current academic catalog and your advisor.*

## Program requirements: 36 credit hours

### Core courses (12 credit hours)

| | |
|---|---|
| EDU 603 Introduction to Educational Research and Design | 3 |
| EDU 621 Education Program Orientation | 0 |
| EDU 652 Instructional Theory and Practice | 3 |
| EDU 658 Fundamentals of Curriculum Development PK-16 | 3 |
| MAT 645 Current Trends in Mathematics Curriculum and Teaching | 3 |

### Mathematics Education focus area (24 credit hours)

| | |
|---|---|
| MAT 530 Seminar in Abstract Algebra | 3 |
| MAT 554 Seminar in Real Analysis I | 3 |
| MAT 610 Modern Geometry for Teachers | 3 |
| MAT 620 Seminar in Discrete Mathematics | 3 |
| MAT 660 Probability and Statistics for Teachers I | 3 |
| Select three of the following | 9 |

- MAT 520 Number Theory (3)
- MAT 535 History of Mathematics (3)
- MAT 555 Seminar in Real Analysis II (3)
- MAT 661 Probability and Statistics for Teachers II (3)
- MAT 682 Topics in Mathematics (3)

## Additional admission requirements

- A B.S. or B.A. in Mathematics or Mathematics Education, or a teaching certificate in secondary mathematics.
- Completion of the calculus sequence (Calculus I, II, and III)
- Completion of nine additional hours of mathematics courses numbered 300 and above is strongly recommended.
- Completion of a mathematics proof course preferred.

## questions? contact:


**Dr. Johanna Barnes**
***Professor***
Benthack Hall, 205P
402-375-7285
jobarne1@wsc.edu

**Dr. Christian Legler**
***Associate Dean, School of Education and Behavioral Sciences***
Benthack Hall, 111B
402-375-7390
chlegle1@wsc.edu


*Revised on: 7/10/26*