

MATHEMATICS, MAT

The Master of Arts for Teachers of Mathematics degree is ideal for:

- Current high school teachers who are planning on teaching advanced secondary mathematics such as dual-enrollment calculus at their high school.
- Any student interested in teaching freshman/sophomore level mathematics courses at local universities.
- Any student interested in pursuing a PhD in education with an emphasis in mathematics.

NOTE: This program does not help a student get a state certification to teach high school math. For those students with an undergraduate degrees already interested in pursuing a degree to teach high school math, but do not yet have a state certification to teach, consider the Teacher Academy Project (<http://www.unomaha.edu/college-of-education/moec/projects/teacher-academy-project/>).

Program Related Information

Program Contact

Michael Matthews, PhD, Graduate Program Chair (GPC)
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Program Website (<http://www.unomaha.edu/college-of-arts-and-sciences/mathematics/>)

Graduate Assistantships

The Department of Mathematics and Statistical Sciences annually awards graduate assistantships for work within the department. These positions come with a salary, tuition waiver, and subsidized health insurance. For the details of the nature of the work, please visit the assistantships page of the Department of Mathematics and Statistical Sciences website.

Teachers of Mathematics Scholarship

The Teacher of Mathematics Scholarship is awarded to teachers of high school mathematics who are interested in obtaining a graduate degree in mathematics (MS, MA, or MAT) at UNO for the purpose of becoming eligible to teach UNO calculus dual enrollment courses. These scholarships are awarded to teachers in school districts that are participating in the dual-enrollment program. They will provide for the reimbursement of resident tuition for up to six graduate credit hours per semester for one year. No scholarship award becomes final until UNO graduate admission status is obtained. Continuation beyond the first year depends upon satisfactory academic progress and funds available. For further information contact Dr. Janice Rech, jrech@unomaha.edu

Fast Track Program

The Department of Mathematics and Statistical Sciences has developed a Fast Track program for highly qualified and motivated students providing the opportunity to complete a bachelor's degree and a master's degree in an accelerated time frame. With Fast Track, students may count up to nine (9) graduate hours toward the completion of their undergraduate program as well as the graduate degree program.

Program Specifics:

- This program is available for undergraduate students pursuing a BA/BS in mathematics or pursuing a double-major with BA/BS in mathematics as the primary or secondary major desiring to pursue a MA/MS/MAT in mathematics.
- Students must have completed no less than 60 undergraduate hours

- Students must have a minimum undergraduate GPA of 3.0.
- Students must complete the Fast Track Approval form, obtain all signatures, and submit to the Office of Graduate Studies prior to first enrollment in a graduate course.
- Students will work with their undergraduate advisor to register for the graduate courses.
- A minimum cumulative GPA of 3.0 is required for graduate coursework to remain in good academic standing.
- Students remain undergraduates until they meet all the requirements for the undergraduate degree and are eligible for all rights and privileges granted undergraduate status including financial aid.
- Near the end of the undergraduate program, formal application to the graduate program is required. The application fee will be waived, the applicant will need to contact the Office of Graduate Studies for a fee waiver code.
 - Admission to Fast Track does NOT guarantee admission to the graduate program.
 - The admit term must be after the completion term of the undergraduate degree.

Admissions

General Application Requirements and Admission Criteria (<http://catalog.unomaha.edu/graduate/admission/>)

Application Deadlines

Spring 2026, Summer 2026, and Fall 2026: Applications for this program are accepted on a rolling basis. All materials must be submitted prior to the beginning of the semester in which the student has elected to begin coursework.

Other Requirements

- Have obtained at least a "B" (3.0 on a 4.0 scale) average in previous mathematics courses, including two courses beyond elementary calculus.
- Hold state certification for teaching secondary school mathematics or related experience in an educational setting. Please note, a master's degree does not lead to initial certification.
- **English Language Proficiency:** Applicants are required to have a command of oral and written English. Those who do not hold a baccalaureate or other advanced degree from the U.S., **OR** a baccalaureate or other advanced degree from a predetermined country on the waiver list (<https://www.unomaha.edu/office-of-graduate-studies/admissions/entrance-exams.php>), must meet the minimum language proficiency score requirement in order to be considered for admission.
 - Internet-based TOEFL: 80, IELTS: 6.5, PTE: 53, Duolingo: 110

Degree Requirements

Code	Title	Credits
Required Courses		
Complete the Mathematics for Teachers sequence:		
MTCH 8020	MATHEMATICAL MODELING FOR SECONDARY TEACHERS	3
MTCH 8030	ALGEBRA FOR ALGEBRA TEACHERS	3
MTCH 8040	TOPICS IN MATHEMATICAL COMPUTING	3
Education Courses		
Graduate only courses TED 8xx0 to be selected in consultation with your advisor		9
Mathematic Sequences		

Complete two advisor approved Mathematics (not MTCH) sequence of courses (total of 18 hours). Each sequence must consist of three connected courses as defined below. Please note other courses may be allowed if approved by your advisor.¹

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Each course instructor will write a 1.5 hour exam and grade the exam as pass or fail. To pass the overall MAT mathematics portion comprehensive exam, the student must pass both.

Theoretical Analysis	
MATH 8235	INTRODUCTION TO ANALYSIS
MATH 8236	MATHEMATICAL ANALYSIS I
MATH 8246	MATHEMATICAL ANALYSIS II
Data Science	
STAT 8416	INTRODUCTION TO DATA SCIENCE
STAT 8426	EXPLORATORY DATA VISUALIZATION AND QUANTIFICATION
STAT 8436	LINEAR MODELS
or STAT 8456	INTRODUCTION TO MACHINE LEARNING AND DATA MINING
Operations Research	
MATH 8306	DETERMINISTIC OPERATIONS RESEARCH MODELS
MATH 8316	PROBABILISTIC OPERATIONS RESEARCH MODELS
MATH 8326	COMPUTATIONAL OPERATIONS RESEARCH
or MATH 8430	LINEAR PROGRAMMING
Algebra	
MATH 8116	ABSTRACT ALGEBRA I
MATH 8126	ABSTRACT ALGEBRA II
MATH 8105	APPLIED COMBINATORICS
or MATH 8060	ALGORITHMIC COMBINATORICS
or MATH 8566	NUMBER THEORY & CRYPTOGRAPHY
Probability and Statistics	
MATH 8746	INTRODUCTION TO PROBABILITY AND STATISTICS I
MATH 8756	INTRODUCTION TO PROBABILITY AND STATISTICS II
MATH 8670	TOPICS IN PROBABILITY AND STATISTICS
or STAT 8436	LINEAR MODELS
or STAT 8446	TIME SERIES ANALYSIS
Partial Differential Equations	
MATH 8336	INTRODUCTION TO PARTIAL DIFFERENTIAL EQUATIONS
MATH 8250	PARTIAL DIFFERENTIAL EQUATIONS
MATH 8500	NUMERICAL LINEAR ALGEBRA
or MATH 8510	NUMERICAL DIFFERENTIAL EQUATIONS
Total Credits	36

¹ For example: Applied Modern Algebra, Algebra 1, and Algebra 2. If one of the courses has been taken previously as an undergraduate the course will not count toward the 36 credits, however it will count in terms of completed the three course sequence. Such a situation would in effect enable the MAT student to finish the three course sequence quicker and free up one class for an elective in mathematics.

Exit Requirements

• Comprehensive Examination

- Pass the mathematics comprehensive examination. The examination is offered three times a year; on April 15, July 15, and November 15 (or the proceeding Friday if any of these dates falls on a weekend). The mathematics exam is three hours in length and covers the terminal course of each of the two math sequence of courses.