

MASTER OF SCIENCE IN MATHEMATICS TEACHING

Web Site: <https://twu.edu/mathematics/graduate-programs/>

The Master of Science in Mathematics Teaching prepares the student to enter the workforce, teach at the community college level, or pursue doctoral degree programs in math education. The Master of Science in Mathematics Teaching is especially designed for elementary or secondary school teachers of mathematics. Course work emphasizes topics needed for the elementary or secondary mathematics teacher. Students can complete the program by taking evening or online courses in fall or spring or five-week courses in the summer. Secondary math teachers that complete this program often teach dual credit courses for their students.

Marketable Skills

Defined by the Texas Higher Education Coordinating Board's 60x30 Strategic Plan (<https://reportcenter.highered.texas.gov/agency-publication/miscellaneous/thecb-60x30-strategic-plan/>) as, "Those skills valued by employers that can be applied in a variety of work settings, including interpersonal, cognitive, and applied skills areas. These skills can be either primary or complementary to a major and are acquired by students through education, including curricular, co-curricular, and extracurricular activities."

1. Assemble sets of assumptions and explore the consequences of each set.
2. Perform computations and apply methods of numerical analysis to data.
3. Determine appropriate methods for data analysis.
4. Prepare and deliver lectures to students, prepare and evaluate assignments on mathematics topics taught in public schools.
5. Disseminate research by writing reports, publishing papers, or presenting at professional conferences.
6. Demonstrate personal accountability and work habits, integrity, and ethical behavior.
7. Proficient in the software tools to achieve the skills listed, such as Geogebra and Geometer's Sketchpad.

Admissions

All students must meet the University requirements as outlined in the Admission to the TWU Graduate School (<http://catalog.twu.edu/graduate/graduate-school/admission-graduate-school/>) section of the catalog.

This academic program may have additional admission criteria that must also be completed as outlined on the program's website.

Degree Requirements

Total Semester Credit Hours Required

This is a 36 semester credit hour (SCH) degree in which the student has the choice of one of the two options below:

- Taking 15 SCH of required math courses and 18 SCH of additional math courses along with MATH 5973. An oral examination upon completion of the professional paper is required.

- Taking 15 SCH of required math courses and 21 SCH of additional math courses. Two comprehensive exams will be required of the student.

To accommodate current mathematics teachers, classes will be offered in the evenings during the fall and spring semester. Substitutions may be made with permission from a mathematics adviser.

Code	Title	SCHs
Required		
MATH 5203	Problem Solving in the Math Classroom	3
MATH 5303	Algebra in the Mathematics Classroom	3
MATH 5313	Geometry in the Mathematics Classroom	3
MATH 5323	Euclidean Geometry	3
MATH 5333	Technology in the Math Classroom	3
Electives		
Choose seven of the following		21
MATH 5033	Advanced Calculus	
MATH 5423	History of Mathematics	
MATH 5483	Theory of Probability and Statistics I	
MATH 5493	Theory of Probability and Statistics II	
MATH 5513	Matrix Algebra	
MATH 5523	Introduction to Number Theory	
MATH 5543	Symbolic Logic	
MATH 5573	Statistical Methods I	
MATH 5583	Statistical Methods II	
MATH 5593	Differential Equations	
MATH 5873	Real Analysis and Topology	
MATH 5973	Professional Paper	
Total SCHs		36

Cooperative Education

In order for coursework in Cooperative Education to be counted as degree credit, department approval must be received during the semester in which the course is taken. This approval is in addition to approval to enroll in Cooperative Education coursework. Cooperative Education coursework, as with any coursework, must also be approved by the student's advisory committee in order to be included on the degree plan. Only three semester credit hours of Cooperative Education may be counted toward the Master's degree.