

# MASTER OF SCIENCE IN MATHEMATICS (APPLIED MATHEMATICS)

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

## Degree Requirements

### Total Semester Credit Hours Required

This is a 30 semester credit hour (SCH) degree in which the student has the choice of three options below:

- Thesis Option: Take 24 SCH of coursework approved by a departmental advisor along with MATH 5983 and MATH 5993. An oral examination upon completion of the thesis is required.
- Professional Paper Option: Take 27 SCH of coursework approved by a departmental advisor along with MATH 5973. An oral examination upon completion of the professional paper is required.
- Coursework Option: Take 30 SCH of coursework approved by a departmental advisor. Three comprehensive exams will be required by the student.

Substitutions may be made with permission from a mathematics advisor.

### Applied Mathematics Emphasis (30 SCH)

Code	Title	SCHs
<b>Required Courses</b>		
MATH 5033	Advanced Calculus	3
MATH 5513	Matrix Algebra	3
MATH 5523	Introduction to Number Theory	3
MATH 5593	Differential Equations	3
MATH 5833	Computer-Aided Mathematical Modeling	3
MATH 5873	Real Analysis and Topology	3
<b>Electives</b>		<b>6</b>
Six SCH selected from MATH and/or CSCI in consultation with and approved by advisor.		
<b>Culmination</b>		<b>6</b>
Thesis Option		
MATH 5983	Thesis	
MATH 5993	Thesis	
Professional Paper Option		
MATH 5973	Professional Paper	
An additional approved 3 SCH course		
Coursework Option		
An additional approved 6 SCH of coursework		
Comprehensive Exams		
<b>Total SCHs</b>		<b>30</b>

### Thesis Option

24 semester credit hours of coursework and 6 semester credit hours for thesis.

### Non-thesis Options

27 semester credit hours of coursework and 3 semester credit hours for professional paper.

30 semester credit hours of coursework and comprehensive exams.

### 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 in the degree plan. Only three semester credit hours of Cooperative Education may be counted toward the Master's degree.

### Final Examination

A comprehensive written examination upon completion of the coursework or an oral examination upon completion of the thesis or professional paper are required for all degrees.