

# MATHEMATICS, MS

two variants correspond to the graduate school's Master's Thesis and Master's Non-Thesis options.

**Degree:** Master of Science (MS)

**Field of Study:** Mathematics

## Program Overview

A student must satisfy all of the general requirements of the School of Graduate Studies as well as the more specific requirements of the department to earn a master's degree. Each graduate student is assigned an academic advisor upon matriculation. The academic advisor's primary responsibility is to help the student plan an appropriate and sufficiently broad program of coursework and study that will satisfy both the degree requirements and the special interests of the student. With the aid of the academic advisor, each student must present a study plan indicating how they intend to satisfy the requirements for a graduate degree. Master's students completing a thesis as part of their program will also form a thesis committee, chaired by their research advisor, to advise on and evaluate both the thesis and its oral defense.

## Graduate Policies

For graduate policies and procedures, please review the School of Graduate Studies section of the General Bulletin.

## Program Requirements

A minimum of 30 credit hours of approved coursework, at least 18 of which must be at the 400-level or higher, is required for the Master of Science degree in Mathematics. The 30 credit hours required for graduation must include 6 credit hours each from two of the following three basic areas:

| Code                          | Title                            | Credit Hours |
|-------------------------------|----------------------------------|--------------|
| <b>Abstract Algebra:</b>      |                                  | <b>6</b>     |
| MATH 401                      | Abstract Algebra I               |              |
| MATH 402                      | Abstract Algebra II              |              |
| <b>Analysis:</b>              |                                  | <b>6</b>     |
| MATH 423                      | Introduction to Real Analysis I  |              |
| MATH 424                      | Introduction to Real Analysis II |              |
| MATH 425                      | Complex Analysis I               |              |
| <b>Geometry and Topology:</b> |                                  | <b>6</b>     |
| MATH 461                      | Introduction to Topology         |              |
| MATH 462                      | Algebraic Topology               |              |
| MATH 465                      | Differential Geometry            |              |
| MATH 467                      | Differentiable Manifolds         |              |

The student must pass a comprehensive examination on three areas, two of which must be selected from the basic ones listed above (although no particular courses are specified). The third area for the examination may be any approved subject.

A student in the MS program in Mathematics may substitute an expository or original thesis, which will count as 6 credit hours of coursework, for the comprehensive examination requirement. The thesis will be defended in the course of an oral examination, during which the student will be questioned about the thesis and related topics. These