

# M.S. IN MATHEMATICS

## Overview

The primary objective of the Master of Science degree in mathematics is to prepare students for careers in teaching. This program also provides the necessary foundation for entry into careers in science, business, government, or other fields which make use of mathematics.

<https://www.math.miami.edu/graduate/program-requirements/#MS>

## Curriculum Requirements

Code	Title	Credit Hours
A minimum of 24 credit hours must be earned in Mathematics Courses		
<b>Choose two of the following:</b>		<b>12</b>
MTH 631 & MTH 632	Topology I and Topology II	
MTH 633 & MTH 634	Introduction to Real Analysis I and Introduction to Real Analysis II	
MTH 661 & MTH 662	Abstract Algebra I and Abstract Algebra II	
MTH Courses 700 level and higher <sup>1</sup>		9-15
Additional Courses <sup>1</sup>		9
Three written exams, at least two of which are on the basic sequences of the above list, must be passed.		
<b>Total Credit Hours</b>		<b>30-36</b>

- <sup>1</sup>
- If a student takes 15 credits in MTH at the 700 level or higher 30 credits are required for the Masters.
  - If a student takes 12-14 credits in MTH at the 700 level or higher 33 credits are required for the Masters.
  - If a student takes 9-11 credits in MTH at the 700 level or higher 36 credits are required for the Masters.

## Sample Plan of Study

Year One		Credit Hours
<b>Fall</b>		
MTH 631	Topology I	3
MTH 633	Introduction to Real Analysis I	3
MTH 661	Abstract Algebra I	3
700 Level Topics Course		3
<b>Credit Hours</b>		<b>12</b>
<b>Spring</b>		
MTH 632	Topology II	3
MTH 634	Introduction to Real Analysis II	3
MTH 662	Abstract Algebra II	3
700 Level Topics Course		3
Topic Sequence MS Exams		
<b>Credit Hours</b>		<b>12</b>
<b>Year Two</b>		
<b>Fall</b>		
700 Level Topics Courses		9-12
<b>Credit Hours</b>		<b>9-12</b>
<b>Total Credit Hours</b>		<b>33-36</b>

## Admission Requirement

A minimum of 15 credit hours in mathematics courses numbered 200 and above is required. For more information about admission, please visit our website (<http://www.math.miami.edu/graduate/application-procedure/>).

## Mission

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## Student Learning Outcomes

- Students will achieve a solid understanding of the material in at least one of the following six advanced mathematics content areas: partial differential equations, ordinary differential equations, probability and statistics, topology, real analysis, and abstract algebra.
- Students will exhibit a broad synthesis of the theory and application of one of the subjects listed in outcome above.
- Upon completion of the degree, students will be interviewed and asked to rate how successful the program was in enabling them to pursue their career goals. The department will document the students' initial employment.