

# MATHEMATICS, MS

This program is designed to provide students with the opportunity to broaden and deepen their knowledge of core areas of mathematics. The course work is designed to provide both breadth of knowledge and depth in an area of interest to the student. This experience will prepare the student for further studies leading to a Ph.D. degree in mathematics. Partial tuition waivers may be available to qualified students.

## Requirements Non-Thesis Option

Course ID	Title	Credits
<b>Required Courses</b>		
MATH 7210 & MATH 7220	Analysis I and Analysis II	6
Select one of the following:		6
MATH 7010 & MATH 7020	Topology I and Topology II	
MATH 7110 & MATH 7120	Algebra I and Algebra II	
MATH 7980	Reading and Research <sup>1</sup>	3
<b>Optional Courses</b>		
Select five additional courses from the optional list <sup>2</sup>		15
<b>Total Credit Hours</b>		<b>30</b>

<sup>1</sup> Consists of a semester-long project under the supervision of a faculty member from the Department

<sup>2</sup> Other courses not listed may be substituted with the approval of the Graduate Studies Committee. Up to six credits may be transferred from other departments or institutions with the approval of the Graduate Studies Committee.

## Additional Requirements

A **four-hour written examination** to be taken upon completion of the course work, with topics drawn from basic material in algebra, topology and analysis taught in the first-year graduate courses. The student is given two chances to pass this exam. One of the Ph.D. Qualifying examinations may be substituted for the Masters exam.

## Thesis Option

Course ID	Title	Credits
<b>Required Courses</b>		
MATH 7210 & MATH 7220	Analysis I and Analysis II	6
Select 1 of the following:		6
MATH 7010 & MATH 7020	Topology I and Topology II	
MATH 7110 & MATH 7120	Algebra I and Algebra II	
<b>Optional Courses</b>		
Select four additional courses from the optional list <sup>1</sup>		12
<b>Total Credit Hours</b>		<b>24</b>

<sup>1</sup> Other courses not listed may be substituted with the approval of the Graduate Studies Committee. Up to six credits may be transferred from other departments or institutions with the approval of the Graduate Studies Committee.

## Additional Requirements

A **thesis** approved by the thesis committee consisting of a faculty member acting as advisor and two additional faculty. The thesis is typically much more substantial than the MATH 7980 Reading and Research (1-9 c.h.) project.

## List of Optional Courses

Course ID	Title	Credits
MATH 6030	Stochastic Processes	3
MATH 6210	Differential Geometry	3
MATH 6300	Complex Analysis I	3
MATH 7240	Mathematical Statistics	3
MATH 7510 & MATH 7520	Differential Geometry I and Differential Geometry II	6
MATH 7530 & MATH 7540	Partial Diff Equations I and Partial Diff Equitns II	6
MATH 7550	Probability Theory II	3
Special Topics Courses <sup>1</sup>		3

<sup>1</sup> MATH 7710 Topics In Algebra (3 c.h.) - MATH 7790 Topics In Topology (3 c.h.)