

MASTER OF SCIENCE IN MATHEMATICS

The Master of Science program in mathematics welcomes students of ability and with a strong undergraduate background in mathematics or a related field, such as computer science, engineering, physics, finance, economics, or certain social sciences.

Requirements

To earn a Master of Science degree in Mathematics, students complete the following in consultation with a faculty advisor:

| Code | Title | Credits |
|--|---|-----------|
| Core Courses | | |
| MATH 5435 | Linear Algebra ¹ | 3 |
| MATH 5471 | Real Analysis ¹ | 3 |
| Select two of the following Proof-Intensive courses: | | 6 |
| MATH 5436 | Abstract Algebra | |
| MATH 5452 | Statistics Theory | |
| MATH 5472 | Complex Analysis | |
| MATH 6535 | Advanced Abstract Algebra | |
| MATH 6537 | Number Theory | |
| MATH 6583 | Geometry | |
| MATH 6585 | Topology | |
| Elective Courses | | |
| Select six courses from the following: | | 18 |
| MATH 5401 | Introduction to Applied Mathematics | |
| MATH 5417 | Applied Statistics I | |
| MATH 5418 | Applied Statistics II | |
| MATH 5436 | Abstract Algebra | |
| MATH 5451 | Probability Theory | |
| MATH 5452 | Statistics Theory | |
| MATH 5472 | Complex Analysis | |
| MATH 6510 | Foundations and Set Theory | |
| MATH 6531 | Dynamical Systems | |
| MATH 6532 | Partial Differential Equations | |
| MATH 6535 | Advanced Abstract Algebra | |
| MATH 6537 | Number Theory | |
| MATH 6550 | Classical Financial Mathematics | |
| MATH 6565 | Use of Technology in the Classroom | |
| MATH 6577 | Numerical Analysis | |
| MATH 6578 | Math of Financial Derivatives | |
| MATH 6583 | Geometry | |
| MATH 6585 | Topology | |
| Capstone | | |
| MATH 6999 | Capstone Project (Pass/Fail) ² | 0 |
| Total Credits | | 30 |

¹ One or both of these courses may be substituted with another proof-intensive course with permission of Program Director.

² Each student should complete, generally in their final semesters, a capstone consisting of a project or an oral or written exposition of mathematics, in consultation with a faculty advisor. Capstones are generally associated with a course the student is taking, though it may be associated with an independent study. The faculty advisor may or may not be the instructor of the associated course, and each student, with the help of their advisor, should develop a proposal in advance for their capstone.