Eight graduate courses (32 semester hours of credit) are required for the degree: three required courses and five elective courses. The required courses provide a basic training in mathematical methods, and the elective courses include a wide variety of advanced topics. In addition, the program allows up to two of the elective courses to be taken outside the Department of Mathematics. No course can be used to satisfy both a requirement and an elective.

**Program Requirements**
Complete all courses and requirements listed below unless otherwise indicated.

**Core Requirements**

Methods and Modeling

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 5131</td>
<td>Introduction to Mathematical Methods and Modeling</td>
<td>4</td>
</tr>
</tbody>
</table>

Algebra and Analysis

Complete one of the following: 4

- MATH 5101 Analysis 1: Functions of One Variable
- MATH 5111 Algebra 1
- MATH 7241 Probability 1

Statistics

- MATH 7342 Mathematical Statistics 4
  - or MATH 7343 Applied Statistics

**Approved Mathematics Electives**

Math Electives

Complete 12 semester hours from the following subject area: 12

- MATH

Open Electives

Complete 8 semester hours. These courses may be chosen from outside the Department of Mathematics with faculty approval.

**Program Credit/GPA Requirements**

- 32 total semester hours required
- Minimum 3.000 GPA required