MATHEMATICS, PH.D.

Seventy-two semester hours of approved graduate courses are required for the Ph.D. degree in mathematics (see below). Other requirements include passing a Qualifying Exam in two of the four year-long core areas (abstract algebra, applied mathematics, real variables, and topology), passing a Preliminary Examination administered by a committee headed by the student's dissertation advisor, and a successful defense of a dissertation. No foreign language is required for the Ph.D. degree.

Core Curriculum

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 5310</td>
<td>Advanced Abstract Algebra I</td>
<td>3</td>
</tr>
<tr>
<td>MTH 5323</td>
<td>Theory of Functions of Real Variables I</td>
<td>3</td>
</tr>
<tr>
<td>MTH 5330</td>
<td>Topology</td>
<td>3</td>
</tr>
<tr>
<td>MTH 5350</td>
<td>Complex Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

Select three courses from the following: 9

- MTH 5311 Advanced Abstract Algebra II
- MTH 5324 Theory of Functions of Real Variables II
- MTH 5331 Algebraic Topology I
- MTH 5360 Applied Mathematics I
- MTH 5361 Applied Mathematics II

**Dissertation**

MTH 6V99 Dissertation 12

**Electives**

Select 39 semester hours from the following: 39

- Any 4000-level MTH course carrying graduate credit or higher
- Any 5000-level or higher STA course
- Or other graduate electives only as approved by the Department of Mathematics

**Total Hours** 72