MINOR IN MATHEMATICS

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Web address for department: www.math.illinois.edu (http://www.math.illinois.edu)

Students must complete MATH 241, and at least one 400-level MATH course for admission into the minor. The Mathematics minor is designed to prepare students majoring in some other discipline with a background in mathematics that is both broad and deep. Students interested in pursuing the minor should have completed the calculus sequence through MATH 241, and one additional Math course at the 400-level demonstrating a strong record of success in college-level mathematics courses. Given the cumulative character of mathematics preparation, students earning grades of C or below in previous mathematics courses are advised not to pursue the minor.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 241</td>
<td>Calculus III</td>
<td>4</td>
</tr>
</tbody>
</table>

Completed in one of two ways:

- MATH 347 Fundamental Mathematics (and four courses chosen from at least two of the following lists of courses) 15

OR

- five courses chosen from at least two of the following lists of courses.

**Algebra**

- ASRM 406 Linear Algebra with Financial Applications (formerly MATH 410)
- MATH 415 Applied Linear Algebra
- MATH 416 Abstract Linear Algebra
- MATH 417 Intro to Abstract Algebra
- MATH 418 Intro to Abstract Algebra II
- MATH 427 Honors Abstract Algebra
- MATH 453 Elementary Theory of Numbers

**Discrete Mathematics**

- MATH 412 Graph Theory
- MATH 413 Intro to Combinatorics
- MATH 414 Mathematical Logic
- MATH 482 Linear Programming

**Analysis**

- MATH 284 Intro Differential Systems
- MATH 285 Intro Differential Equations
- MATH 286 Intro to Differential Eq Plus
- MATH 424 Honors Real Analysis
- MATH 425 Honors Advanced Analysis
- MATH 441 Differential Equations
- MATH 442 Intro Partial Diff Equations
- MATH 444 Elementary Real Analysis
- MATH 446 Applied Complex Variables
- MATH 447 Real Variables
- MATH 448 Complex Variables
- CS 450 Numerical Analysis
- MATH 484 Nonlinear Programming

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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<tbody>
<tr>
<td>MATH 487</td>
<td>Advanced Engineering Math</td>
</tr>
<tr>
<td>MATH 489</td>
<td>Dynamics &amp; Differential Eqns</td>
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<tr>
<td><strong>Geometry</strong></td>
<td></td>
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<tr>
<td>MATH 402</td>
<td>Non Euclidean Geometry</td>
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<tr>
<td>MATH 403</td>
<td>Euclidean Geometry</td>
</tr>
<tr>
<td>MATH 423</td>
<td>Differential Geometry</td>
</tr>
<tr>
<td>MATH 428</td>
<td>Honors Topics in Mathematics</td>
</tr>
<tr>
<td>MATH 432</td>
<td>Set Theory and Topology</td>
</tr>
<tr>
<td>MATH 481</td>
<td>Vector and Tensor Analysis</td>
</tr>
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**Probability and Statistics**

- MATH 461 Probability Theory
- STAT 400 Statistics and Probability I
- STAT 410 Statistics and Probability II
- or STAT 420 Methods of Applied Statistics

Total Hours 19

1 Students may use STAT 410 or STAT 420, but not both toward the minor.