# Mathematics, BSLAS

for the degree of Bachelor of Science in Liberal Arts & Sciences Major in Mathematics

Department page: [https://www.math.illinois.edu/](https://www.math.illinois.edu/)
Department website: [Mathematics Faculty](https://math.illinois.edu/directory/faculty)
Overview of college admissions & requirements: [Liberal Arts & Sciences](https://catalog.illinois.edu/las)
College website: [https://las.illinois.edu/](https://las.illinois.edu/)
Email: [mathadvising@illinois.edu](mailto:mathadvising@illinois.edu)

A Major Plan of Study form, declaring concentration and supporting coursework, must be completed and submitted to the LAS Student Academic Affairs Office except for students in the Teaching of Mathematics concentration. Please complete this form with an advisor in the Mathematics Undergraduate Office within 1-2 semesters of completing MATH 347 or MATH 348.

Departmental distinction: Distinction will be awarded on the basis of selection of 400-level courses in mathematics and the grade point average. Graduation with High Distinction or Highest Distinction in Mathematics requires participation in the Program for Distinction in Mathematics or Mathematics Education. Full details are available at the departmental website.

Information listed in this catalog is current as of 05/2019

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Core Courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 241</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH 347</td>
<td>Fundamental Mathematics</td>
<td>3-4</td>
</tr>
<tr>
<td>or MATH 348</td>
<td>Fundamental Mathematics-ACP</td>
<td></td>
</tr>
<tr>
<td>MATH 416</td>
<td>Abstract Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 417</td>
<td>Intro to Abstract Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 424</td>
<td>Honors Real Analysis</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 425</td>
<td>Honors Abstract Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 461</td>
<td>Probability Theory</td>
<td>3-4</td>
</tr>
<tr>
<td>or STAT 400</td>
<td>Statistics and Probability I</td>
<td></td>
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</tbody>
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Mathematics Courses
Select a total of two courses from two of the following three lists:

### Geometry
- MATH 402 Non Euclidean Geometry
- MATH 403 Euclidean Geometry
- MATH 423 Differential Geometry
- MATH 481 Vector and Tensor Analysis

### Differential Equations and Complex Analysis
- MATH 441 Differential Equations
- MATH 446 Applied Complex Variables
- MATH 448 Complex Variables

### Number Theory
- MATH 453 Elementary Theory of Numbers
- Two additional 400- or 500-level Math courses

Total Hours: 46-49

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1. Students should have credit for MATH 220/MATH 221 and MATH 231 before enrolling in MATH 241.
2. Beginning in Fall 2012, students may not receive credit for both MATH 416 and either ASRM 406(formerly MATH 410) or MATH 415. However, if one course is taken prior to Fall 2012, credit may be earned for both MATH 416 and either of ASRM 406 (formerly MATH 410) or MATH 415.
3. If MATH 424 or MATH 447 is completed, a requirement for the Graduate Preparatory concentration has been satisfied.
4. If STAT 400 is completed, a requirement for the Operations Research concentration has been satisfied.