Mathematics is a broad discipline that contains a range of areas of specialization within it. The required core courses provide fundamental background for mathematics in general. The concentrations allow the student to broaden this background or begin to specialize. Students must complete the core courses and a concentration.

An entering student in mathematics should have academic preparation to enroll in MATH 220 (http://catalog.illinois.edu/search/?P=MATH%20220) during the first semester. Admission to MATH 220 (http://catalog.illinois.edu/search/?P=MATH%20220) requires an acceptable ALEKS score. A student should attain grades of B in calculus in order to complete the advanced courses successfully.

Undergraduate programs in Mathematics
Actuarial Science, BSLAS (http://catalog.illinois.edu/undergraduate/las/actuarial-science-bslas)
Mathematics, BSLAS (http://catalog.illinois.edu/undergraduate/las/mathematics-bslas/#text)
Mathematics & Computer Science, BSLAS (http://catalog.illinois.edu/undergraduate/eng_las/mathematics-computer-science-bslas)

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

Minimum required major and supporting coursework: Normally equates to 46-57 hours including 27-35 hours of mathematics beyond calculus, 3-4 hours of computer science, and 12 hours of supporting coursework.

Twelve hours of 300- and 400-level in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 241</td>
<td>Calculus III 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 347</td>
<td>Fundamental Mathematics or MATH 348Bundamental Mathematics-ACP</td>
<td>3-4</td>
</tr>
<tr>
<td>MATH 416</td>
<td>Abstract Linear Algebra 2</td>
<td>3</td>
</tr>
<tr>
<td>MATH 417</td>
<td>Intro to Abstract Algebra or MATH 42 Honors Abstract Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 424</td>
<td>Honors Real Analysis 3 or MATH 44 Elementary Real Analysis or MATH 44 Real Variables</td>
<td>3-4</td>
</tr>
<tr>
<td>MATH 461</td>
<td>Probability Theory 4 or STAT 400 Statistics and Probability I</td>
<td>3-4</td>
</tr>
<tr>
<td>CS 101</td>
<td>Intro Computing: Engrg &amp; Sci or CS 125 Intro to Computer Science</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Approved supporting coursework or any minor 12

Applied Mathematics Courses
MATH 441 Differential Equations 3
MATH 446 Applied Complex Variables or MATH 44 Complex Variables 3
CS 357 Numerical Methods I or MATH 44 Intro Partial Diff Equations or MATH 48 Dynamics & Differential Eqns 3
MATH 412 Graph Theory or MATH 41 Intro to Combinatorics or MATH 48 Linear Programming 3
One additional 400- or 500-level Math course 3

Total Hours 49-52

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 44 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.