Information listed in this catalog is current as of 04/2016

TEACHING OF MATHEMATICS
CONCENTRATION

For the Degree of Bachelor of Science in
Liberal Arts and Sciences
Major in Sciences and Letters Curriculum
E-mail: mathadvising@illinois.edu

Minimum required major and supporting course work 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 courses in the major must be taken on
this campus.

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.

Minimum hours required for graduation: 120 hours

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.

In order to remain in good standing in this program and be recommended
for certification, candidates are required to maintain UIUC, cumulative,
content area, and professional education, grade-point averages of 2.5 (A=
4.0). Candidates should consult their adviser or the Council on Teacher
Education for the list of courses used to compute these grade-point
averages.

General education: Students must fulfill the Campus General Education
(https://courses.illinois.edu) requirements including the campus general
education language requirement. In addition, students must take a
speech performance course chosen from the following list: CMN 101,
CMN 113, CMN 321, CMN 323 or satisfy the Composition I requirement
with CMN 111 and CMN 112.

Required Prerequisite Courses
Prerequisite courses must be completed prior to transfer into
the teaching concentration and hence must be in progress or
completed at the time of application.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPSY 201</td>
<td>Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>EPS 201</td>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>or EPS 202</td>
<td>Foundations of Education-ACP</td>
<td></td>
</tr>
<tr>
<td>MATH 220</td>
<td>Calculus</td>
<td>4-5</td>
</tr>
<tr>
<td>or MATH 221</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>MATH 231</td>
<td>Calculus II</td>
<td>3</td>
</tr>
<tr>
<td>MATH 241</td>
<td>Calculus III</td>
<td>4</td>
</tr>
</tbody>
</table>

Three advanced mathematics courses, including

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 347</td>
<td>Fundamental Mathematics-ACP</td>
<td></td>
</tr>
</tbody>
</table>

or MATH 348 Fundamental Mathematics

Required Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 416</td>
<td>Abstract Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MATH 417</td>
<td>Intro to Abstract Algebra</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 427</td>
<td>Honors Abstract Algebra</td>
<td></td>
</tr>
<tr>
<td>MATH 424</td>
<td>Honors Real Analysis</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 444</td>
<td>Elementary Real Analysis</td>
<td></td>
</tr>
<tr>
<td>or MATH 447</td>
<td>Real Variables</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>
</tr>
<tr>
<td>CS 101</td>
<td>Intro Computing: Engrg &amp; Sci</td>
<td>3-4</td>
</tr>
<tr>
<td>or CS 125</td>
<td>Intro to Computer Science</td>
<td></td>
</tr>
</tbody>
</table>

In addition to the requirements listed above, students must complete
the Teaching of Mathematics Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 402</td>
<td>Non Euclidean Geometry</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 403</td>
<td>Euclidean Geometry</td>
<td></td>
</tr>
<tr>
<td>MATH 453</td>
<td>Elementary Theory of Numbers</td>
<td>3</td>
</tr>
</tbody>
</table>

Two additional 400- or 500-level mathematics courses

Total Hours: 50-53

In addition to the requirements listed above, students must complete
the Teacher Education Minor in Secondary School Teaching (Total
Hours: 37 - 38 hours). Conferral of the degree of Bachelor of Science
in Liberal Arts and Sciences prior to completion of the minor requires
approval by petition to the LAS Student Academic Affairs Office. While it
is possible to complete this program in eight semesters, many students
may require an extra semester or two. Please note: the Secondary School
Teaching Minor requires 2 groups of courses listed above under Required
Prerequisite Courses (EPSY 201 and EPS 201/EPS 202). The hours for
those courses are calculated in the Minor total hours (37-38 hours), not
the Teaching of Mathematics Concentration total hours (50-53 hours).

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 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 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 group requirement for the Operations
Research concentration has been satisfied.