Mathematics Teaching Concentration

https://math.illinois.edu/academics/undergraduate-program-mathematics

For the Degree of Bachelor of Science in Liberal Arts and Sciences

Major in Mathematics, Mathematics Teaching Concentration

E-mail: mathadvising@illinois.edu

Minimum required course work normally equates to 80-84 hours including 27-29 hours of mathematics beyond calculus, 3-4 hours of computer science, and 39 hours for the Teacher Education Minor in Secondary School Teaching.

General education: Students must fulfill the Campus General Education (https://courses.illinois.edu) requirements including the campus general education language requirement.

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

Minimum hours required for graduation: 120 hours

This concentration fulfills state certification requirements to teach high school math (grades 9-12) through the AP/honors level.

Students in this concentration must complete the Teacher Education Minor in Secondary School Teaching (39 hours). See the College of Education section for requirements of the minor (http://catalog.illinois.edu/undergraduate/education/secondary).

Time to degree completion varies. Minimum time to completion is 8 semesters, with some students requiring 10 semesters. Transfer students may need 10 total semesters combined to complete the program. Please see the LAS section in the transfer handbook (https://admissions.illinois.edu/Content/docs/Handbook_LAS.pdf) for more information.

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.

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.

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<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>MATH 220</td>
<td>Calculus</td>
<td>4-5</td>
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or MATH 221 Calculus I

MATH 231 Calculus II 3

MATH 241 Calculus III 4

Three advanced mathematics courses, including

MATH 347 Fundamental Mathematics or MATH 348 Fundamental Mathematics-ACP 3-4

Required Core Courses

MATH 416 Abstract Linear Algebra 2 3

MATH 417 Intro to Abstract Algebra 3

or MATH 427 Honors Abstract Algebra

MATH 424 Honors Real Analysis 3 3

or MATH 447 Elementary Real Analysis

or MATH 448 Real Variables

MATH 461 Probability Theory 4 3-4

or STAT 400 Statistics and Probability I

CS 101 Intro Computing: Engrg & Sci 3-4

or CS 125 Intro to Computer Science

Teacher Education Minor in Secondary School Teaching (http://catalog.illinois.edu/undergraduate/education/secondary) 39

Mathematics Teaching Courses

MATH 402 Non Euclidean Geometry 3

or MATH 403 Euclidean Geometry

MATH 453 Elementary Theory of Numbers 3

Two additional 400- or 500-level mathematics courses 6

Total Hours 80-84

1 Students should have credit for MATH 220/MATH 221 and MATH 231 before enrolling in MATH 241.

2 Students may not receive credit for both MATH 416 and either 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 group requirement for the Operations Research concentration has been satisfied.