Mathematics Education, B.A.

Requirements

The Bachelor of Arts with a major in mathematics education requires a minimum of 120 s.h., including 42 s.h. in mathematics professional education courses, and a minimum of 41-42 s.h. in mathematics education content courses for students earning the B.A. in mathematics or a minimum of 47-50 s.h. in mathematics education content courses for students earning the B.S. in mathematics. Students must maintain a g.p.a. of at least 2.70 in professional education course requirements. They also must complete the GE CLAS Core. The major requires admission to the Teacher Education Program (TEP). Application information can be obtained through the Office of Student Services.

Students must earn a B.A. in mathematics (program B) or a B.S. in mathematics (program B) at the University of Iowa in order to earn the B.A. in mathematics education; both degrees may be earned at the same time. Separate application to each degree program is required. Graduates who have earned one of these degrees at another institution and wish to earn the B.A. in mathematics education should consult the Department of Teaching and Learning; additional coursework may be required. Students also complete coursework in teacher licensure including student teaching.

An Iowa secondary teaching license qualifies holders to teach in grades 5-12. Additional subject area endorsements can be completed in any 5-12 licensure program. For more information and an advisor, contact the Department of Teaching and Learning.

For initial licensure, student teaching must be an all-day, full-semester experience. Most students are placed in a district within a 60-mile radius of Iowa City. Placements outside this area require special approval and are considered on an individual basis. Special site programs provide experience in districts with diverse populations and students also may apply to student teach at international sites for the second half of the semester.

Additional information about options for student teaching and application procedures is available from the Office of Student Services. Applications for student teaching must be submitted during the calendar year before the student teaching semester. The deadline for student planning to student teach the following fall semester is November 15 and April 15 for the following spring semester.

The B.A. with a major in mathematics education requires the following work.

Professional Education Course Requirements

Students complete 42 s.h. from the following.

Foundation Courses

Foundation courses may be completed before or after admission to the major.

Additional Licensure Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of these:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDTL:4900</td>
<td>Foundations of Special Education</td>
<td>3</td>
</tr>
<tr>
<td>EPLS:3000</td>
<td>Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>PSQF:1075</td>
<td>Educational Psychology and Measurement</td>
<td>3</td>
</tr>
</tbody>
</table>

Mathematics Education Content Courses

Students earning a B.A. in mathematics complete at least 41-42 s.h. from the following; students earning a B.S. in mathematics complete at least 47-50 s.h. from the following.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of these:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS:1210</td>
<td>Computer Science I: Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>MATH:1850</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MATH:1860</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>MATH:2150</td>
<td>Foundations of Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH:2700</td>
<td>Introduction to Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td>MATH:2850</td>
<td>Calculus III</td>
<td>4</td>
</tr>
<tr>
<td>MATH:3720</td>
<td>Introduction to Abstract Algebra I</td>
<td>4</td>
</tr>
<tr>
<td>MATH:3770</td>
<td>Fundamental Properties of Spaces and Functions I</td>
<td>4</td>
</tr>
</tbody>
</table>
Academic Plans

Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

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<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT:3120</td>
<td>Probability and Statistics</td>
<td>4</td>
</tr>
<tr>
<td>One of these:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH:4050</td>
<td>Introduction to Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH:4060</td>
<td>Discrete Mathematical Models</td>
<td>3</td>
</tr>
<tr>
<td>And:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>students earning a B.A. in mathematics, one additional course beyond calculus</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>students earning a B.S. in mathematics, three additional courses beyond calculus, including at least two courses numbered MATH:4120 or above</td>
<td>9-12</td>
<td></td>
</tr>
</tbody>
</table>

Hours 17-19

Summer

Exam: PRAXIS core exam for Teacher Education Program
Prepare materials for Teacher Education Program application (e.g. essays, letters of recommendation)

Hours 0

Second Year

Fall

GE CLAS Core: World Languages Second Level Proficiency or elective course
PSQF:1075 Educational Psychology and Measurement
GE CLAS Core: Diversity and Inclusion
10-hour pre-admission school field experience

Hours 16-17

Spring

MATH:2150 Foundations of Geometry
EDTL:3091 Secondary Education Program Orientation and Classroom Management
EDTL:3095 Teaching Reading in Secondary Content Areas
EDTL:3002 Technology in the Classroom
GE CLAS Core: World Languages Fourth Level Proficiency or elective course
GE CLAS Core: Social Sciences

Hours 16-17

Third Year

Fall

MATH:3720 Introduction to Abstract Algebra I
MATH:4050 Introduction to Discrete Mathematics
EDTL:3532 Introduction and Practicum: Mathematics
EDTL:4900 Foundations of Special Education
GE CLAS Core: Historical Perspectives

Hours 16

Spring

MATH:3770 Fundamental Properties of Spaces and Functions I
STAT:3120 Probability and Statistics
EDTL:3534 Methods: Middle School Mathematics
EPLS:4180 Human Relations for the Classroom Teacher

Elective course

Hours 15
Fourth Year

Fall
GE CLAS Core: Literary, Visual, and Performing Arts 3
GE CLAS Core: Natural Sciences with Lab 4
Major: required post-calculus math elective course 3-4
EDTL:4535 Methods: High School Mathematics 3
Elective course 2
Apply for student teaching (see the College of Education website for application instructions and deadlines)

Spring
CS:1210 Computer Science I: Fundamentals 4
GE CLAS Core: Natural Sciences without Lab 3
GE CLAS Core: International and Global Issues 3
Elective course 3
Elective course 2

Hours 15-16

Fifth Year

Fall
EDTL:4087 Seminar: Curriculum and Student Teaching 3
EDTL:4091 Observation and Laboratory Practice in the Secondary School 6
EDTL:4092 Observation and Laboratory Practice in the Secondary School 6
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall)
Exam: edTPA

Hours 15

Total Hours 140-147

a Completion of the Mathematics (Program B) BA major requirements (41-42 s.h.), the Teacher Education Program requirements (39 s.h.), and all general education requirements (including World Languages) (48-52 s.h.) exceeds the minimum 120 s.h. expected for a bachelor’s degree in CLAS. Students pursuing this program of study should expect to take higher than average number (15 s.h.) of semester hours per term, take summer classes, and/or extend graduation time frame beyond four years.
b These majors include a BA in mathematics (program B) or a BS in mathematics (program B) at the University of Iowa.
c Students who have completed four years of a single language in high school have satisfied the GE CLAS Core World Languages requirement. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course.
d Enrollment in math courses requires completion of a placement exam.
e Students may use elective courses to earn credit towards the total s.h. required for graduation or to complete a double major, minors, or certificates.
f Course required for the Teacher Education Program and may be completed prior to admission to the College of Education.
g GE CLAS Core courses may be completed in any order unless used as a prerequisite for another course. Students should consult with an advisor about the best sequencing of courses.
h Required for admission into the Teacher Education Program.
i Complete the College of Education verification of 10 hour field experience form available on the Office of Educational Services web page.
j Please see the College of Education website for detailed application instructions and deadlines. Admission is selective and a priority deadline exists.
k Course may also be offered in the summer session.