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.

Additional Licensure Courses

Students in mathematics education must complete 42 s.h. in professional education courses for students earning the B.A. in mathematics or 47-50 s.h. in professional education courses for students earning the B.S. in mathematics. Additional license courses 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.

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>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>

Additional Licensure Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<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>
### 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.

#### Mathematics Education, B.A.

<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>

#### Second Year

**Fall**

- **GE CLAS Core: World Languages Second Level Proficiency or elective course**
  - Hours: 4 - 5
- **PSQF:1075 Educational Psychology and Measurement**
  - Hours: 3
- **GE CLAS Core: Diversity and Inclusion**
  - Hours: 3
- **10-hour pre-admission school field experience**
  - Hours: 0

**Spring**

- **Exam: PRAXIS core exam for Teacher Education Program**
  - Hours: 17-19
- **Prepare materials for Teacher Education Program application (e.g. essays, letters of recommendation)**
  - Hours: 0

#### Third Year

**Fall**

- **MATH:3720 Introduction to Abstract Algebra I**
  - Hours: 4
- **MATH:4050 Introduction to Discrete Mathematics**
  - Hours: 3
- **EDTL:3532 Introduction and Practicum: Mathematics**
  - Hours: 3
- **EDTL:4900 Foundations of Special Education**
  - Hours: 3
- **GE CLAS Core: Historical Perspectives**
  - Hours: 3

**Spring**

- **MATH:3770 Fundamental Properties of Spaces and Functions I**
  - Hours: 4
- **STAT:3120 Probability and Statistics**
  - Hours: 4
- **EDTL:3534 Methods: Middle School Mathematics**
  - Hours: 3
- **EPLS:4180 Human Relations for the Classroom Teacher**
  - Hours: 3
- **Elective course**
  - Hours: 1
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 q 3 - 4
EDTL:4535 Methods: High School Mathematics m 3
Elective course e 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 e 3
Elective course e 2

Fifth Year

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

Hours 15-16

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 Complete the College of Education verification of 10 hour field experience form available on the Office of Educational Services web page.
i Required for admission into the Teacher Education Program.
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.
l Typically this course is offered in spring semesters only. Check MyUI for course availability since offerings are subject to change.
m Course required for the Teacher Education Program and may only be completed after admission to the College of Education.
n Course must be completed during the first semester of enrollment in the Teacher Education Program.
o Requirement should be completed after admission to the Teacher Education Program.
p Students must complete MATH:4050, a fall-only course, or MATH:4060, a spring-only course.
q Post-calculus courses are numbered 2000 or above, excluding: MATH:3700, MATH:3750, MATH:3995, MATH:3996, MATH:3997, MATH:4010, and MATH:4020.
r Please see Academic Calendar, Office of the Registrar website for current degree application deadlines. Students should apply for a degree for the session in which all requirements will be met. For any questions on appropriate timing, contact your academic advisor. For more information visit http://commencement.uiowa.edu/
s As a requirement for completion of an approved Teacher Education Program for initial teaching licensure, the state of Iowa requires a passing score on this exam. The test is required before recommendation for licensure or certification to any state.