

Mathematics, BA

Academic Plans

Four-Year Graduation Plan

The following checkpoints list the minimum requirements students must complete by certain semesters in order to stay on the university's Four-Year Graduation Plan. Courses in the major are those required to complete the major; they may be offered by departments other than the major department.

Many mathematics courses must be taken in sequence, so students must begin major requirements as early as possible, and individual plans of study must be constructed carefully. The major typically requires 11 or 12 courses. Students must choose Program A, B, or C by the end of the third semester and must remain in their chosen program until they graduate in order to stay on track for the four-year graduation plan.

Before the third semester begins: coursework in the major through second-semester calculus.

Before the fifth semester begins: two or three more courses in the major.

Before the seventh semester begins: three or four more courses in the major and at least 90 s.h. earned toward the degree.

Before the eighth semester begins: two or three more courses in the major.

During the eighth semester: enrollment in all remaining coursework in the major, all remaining GE CLAS Core courses, and a sufficient number of semester hours to graduate.

Sample Plans 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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- Program A [p. 1]
- Program B [p. 2]

Program A

Course	Title	Hours
Academic Career		
Any Semester		
Program A is primarily for students who plan to work in business or government or to pursue graduate study in mathematics.		
Students must earn at least 15 s.h. in post-calculus mathematics courses offered by the Department of Mathematics or cross-referenced with a mathematics course at the University of Iowa. Post-calculus courses are numbered 2000 or above, excluding: MATH:3700 Introduction to Matrix Theory, MATH:3996 Individual Study & Honors in Mathematics, MATH:3997 Readings in Mathematics, MATH:4010 Basic Analysis, and MATH:4020 Basic Abstract Algebra. ^a		
GE CLAS Core: Sustainability ^b		
Hours		0

First Year

Fall

MATH:1850	Calculus I ^c	4
RHET:1030	Rhetoric	3 - 4
	or ENGL:1200 or The Interpretation of Literature	
GE CLAS Core: Values and Culture ^d		3
Elective course ^e		2
CSI:1600	Success at Iowa	2
Hours		14-15

Spring

MATH:1860	Calculus II	4
RHET:1030	Rhetoric	3 - 4
	or ENGL:1200 or The Interpretation of Literature	
GE CLAS Core: Diversity and Inclusion ^d		3
GE CLAS Core: Literary, Visual, and Performing Arts ^q		3
Elective course ^e		2
Hours		15-16

Second Year

Fall

MATH:2700	Introduction to Linear Algebra	4
MATH:2850	Calculus III	4
GE CLAS Core: Social Sciences ^d		3
GE CLAS Core: World Languages First Level Proficiency or elective course ^f		4 - 5
Hours		15-16

Spring

MATH:3600	Introduction to Ordinary Differential Equations	3
MATH:3720	Introduction to Abstract Algebra I	4
GE CLAS Core: Historical Perspectives ^d		3
GE CLAS Core: World Languages Second Level Proficiency or elective course ^f		4 - 5
Hours		14-15

Third Year

Fall

MATH:3770	Fundamental Properties of Spaces and Functions I	4
Major: required post-calculus math elective course ^g		3
GE CLAS Core: Natural Sciences with Lab ^d		4
GE CLAS Core: World Languages Third Level Proficiency or elective course ^f		4 - 5
Hours		15-16

Spring

Major: required post-calculus math elective course ^g		3
GE CLAS Core: Natural Sciences without Lab ^d		3
GE CLAS Core: World Languages Fourth Level Proficiency or elective course ^f		4 - 5
Elective course ^{e, h}		3
Elective course ^{e, h}		3
Hours		16-17

Fourth Year

Fall

Major: required upper-level math elective course ⁱ		3
GE CLAS Core: International and Global Issues ^d		3
Elective course ^{e, h}		3

Elective course ^{e, h}	3
Elective course ^{e, h}	3
Hours	15
Spring	
Major: required post-calculus math elective course ^g	3
Elective course ^{e, h}	3
Elective course ^{e, h}	3
Elective course ^{e, h}	3
Elective course ^{e, h}	3
Degree Application: apply on MyUI before deadline (typically in February for spring, September for fall) ^j	
Hours	15
Total Hours	119-125

Program B

This sample plan is being reviewed and will be added at a later date.

- a See General Catalog or consult an advisor for more information.
- b Sustainability must be completed by choosing a course that has been approved for Sustainability AND for one of these General Education areas: Natural Sciences; Quantitative and Formal Reasoning; Social Sciences; Historical Perspectives; International and Global Issues; Literary, Visual, and Performing Arts; or Values and Culture.
- c Enrollment in math courses requires completion of a placement exam.
- d 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.
- 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 Students who have completed four levels of a single language or two levels of two different languages in high school or college have satisfied the GE CLAS Core World Languages requirement. Students who have completed three levels of a single language may complete a fourth-level course in the same language or may choose an approved World Language and Cultural Exploration course. Enrollment in world languages courses requires a placement exam, unless enrolling in a first-semester-level course. Contact your academic advisor or CLAS Undergraduate Programs Office with questions concerning the World Languages requirement.
- g At least two of the four major electives must have a prefix of MATH, including at least one upper-level math course. See General Catalog or consult an advisor for more information about appropriate elective courses.
- h Electives may also be used to complete additional hours in the major up to a total of 56 s.h.
- i Mathematical electives must include at least one upper-level math course. These include: MATH:3900 and math courses (MATH prefix) numbered 4000 and higher, but not MATH:4010, MATH:4020 and MATH:4120. Each upper-level math course is offered at most once per year; choose when to complete the upper-level requirement according to spring or fall offerings for desired courses.
- j 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 or Degree Services.