

Mathematics

DEGREE PROGRAMS

B.S. Mathematics

Minor:

Mathematics

Licensure Program:

Mathematics (7-12)

FACULTY / STAFF

- Jerry Davis, *Professor*
- Glenn Spoul, *Professor*
- Christopher Aubuchon, *Associate Professor*
- Julie Theoret, *Associate Professor*
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Bachelor of Science in Mathematics

The B.S. in mathematics provides students with an opportunity to study one of western civilization's oldest and richest disciplines. In addition to the intrinsic value of the study of mathematics as a liberal art, the mathematics degree provides the foundation for a variety of careers in business, scientific, and related fields. Students desiring preparation for a high school teaching career may also earn secondary mathematics teaching licensure.

LEARNING OUTCOMES FOR MATHEMATICS MAJORS

The mathematics program aims to produce graduates who are knowledgeable and skillful users and communicators of mathematics. More specifically, the degree program seeks to produce graduates who:

- a) Are familiar with many of the common themes in contemporary mathematics;
- b) Can execute the associated algorithmic and logical procedures accurately, recognizing when they are appropriate, while making effective use of technological aids as necessary;
- c) Can explain the main ideas of mathematics clearly, in writing and orally;
- d) Have significant experience applying some of the central concepts of mathematics to extended, non-routine problems;
- e) Have significant experience with the kinds of reasoning that support higher mathematics; and
- f) Have developed the ability to read mathematics independently.

REQUIRED COURSES	CREDITS	SEMESTER
MAT-1531 Calculus I	4	_____
MAT-2030 Probability and Statistics	3	_____
MAT-2140 Modeling the Environment	3	_____
MAT-2532 Calculus II	4	_____
MAT-3210 Linear Algebra	3	_____

Students must take a core assessment examination upon completion of the core requirements.

Elective Courses (at least 15 credits)

MAT-2533 Calculus III	4	_____
MAT-3240 Probability Theory with Statistics	3	_____
MAT-3310 Differential Equations	3	_____
MAT-4130 Abstract Algebra*	3	_____
MAT-4140 Geometry*	3	_____
MAT-4710 Special Topics in Mathematics	3	_____

Capstone Requirement:

MAT-4930 Senior Project	3	_____
Total	35	

Students must earn a grade of C or better in each of the required core courses and in each of the elective courses used to satisfy their degree program requirements.

Note: *Students in the math major are required to take PHY-1014, Physics I, as part of their General Education Core Curriculum science requirement, and to take INT-3150, Gödel, Escher, Bach: An Eternal Golden Braid, as one of their General Education Core Curriculum interdisciplinary courses. It is also recommended that students take a course in economics.*

**At least one of these is required for Secondary Licensure.*

LICENSURE IN MATHEMATICS (7-12)

Students desiring teacher licensure in mathematics must submit passing scores on Praxis I and II, complete the B.S. degree in mathematics, with no core courses or electives below a C grade, and the following courses:

REQUIRED COURSES	CREDITS	SEMESTER
EDU-2110 Introduction to Exceptional Populations	3	_____
EDU-2170 Adolescent Development	3	_____

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MATHEMATICS

REQUIRED COURSES		CREDITS	SEMESTER
EDU-2320	Engaged in Creative Teaching and Learning	3	_____
EDU-3020	Educational Psychology	3	_____
EDU-3240	Literacy Development in the Content Areas	3	_____
EDU-4850	Secondary Education Student Teaching	12	_____
MAT-3030	Mathematics Methods for Secondary School Teachers	4	_____
MAT-4140	Geometry OR		
MAT-4130	Abstract Algebra	3	_____
TOTAL		34	

**Please see other important licensure requirements outlined on pages 34-41 of this catalogue.*

Minors

MATHEMATICS

Students desiring a minor in mathematics must complete the following requirements:

REQUIRED COURSES		CREDITS	SEMESTER
MAT-1531	Calculus I	4	_____
MAT-2030	Probability and Statistics	3	_____
MAT-2140	Modeling the Environment	3	_____
MAT-2532	Calculus II	4	_____
MAT-3210	Linear Algebra	3	_____

Elective

One course: either MAT-2533 or any mathematics course at the 3000/4000 level, with the exception of MAT-3030 noted below.

TOTAL		20	
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Students must earn a grade of C or better in all courses for the minor in mathematics.

Note: MAT-3030 may not be included for credit toward the major or minor in mathematics.

The Department of Mathematics offers courses with the following designator: MAT (mathematics). See full course descriptions beginning on page 97.