

DEPARTMENT OF MATHEMATICS

Bachelor of Science: Mathematics

Minor: Mathematics

Teaching Licensure: Mathematics (7-12)

Professors: Jerry Davis, Glenn Sproul

Associate Professor: Christopher Aubuchon

Assistant Professor: Noble Francoeur

Bachelor's Degree Programs

• 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.

Required Core Courses (17 credits)	Credits
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.

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

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 Teacher Licensure.*

• LICENSURE IN MATHEMATICS (GRADES 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:

EDU-2110 Introduction to Exceptional Populations	3
EDU-2170 Adolescent Development	3
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
Total	31

*Please see other important licensure requirements outlined on pages 28-32 of this catalogue.

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.

Minor

• MINOR IN MATHEMATICS

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

	Credits
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 math course at the 3000/4000 level.

Total 20

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 65.

