MATHEMATICS (B.A.)

The Bachelor of Arts in Mathematics provides students breadth and depth through an integrated approach to the study of mathematics. The program prepares students for an immediate career in business, industry, the government, or teaching.

A decision to undertake the Mathematics Major should be made no later than the beginning of the sophomore year if the program is to be completed in four years. Students should both meet with a mathematics advisor and takeMATH-211 Calculus I as soon as possible.

Integrative Studies Requirements

40 credits minimum

Code	Title	Credits	Completed
Major Requirements (48 credits)			_____
MATH-141	Introductory Statistics	4	_____
MATH-181	Comp Tools for Problem Solving	4	_____
MATH-211	Calculus I	4	_____
MATH-212	Calculus II	4	_____
MATH-235	Discrete Math With Proof	4	_____
MATH-335	Linear Algebra	4	_____
MATH-341	Applied Statistics	4	_____
MATH-421	Abstract Algebra	4	_____
MATH-422	Geometry	4	_____
INPHYS-241	University Physics I	4	_____
*Select **one** of the following:*		*4*	_____
MATH-311	Vector Calculus		_____
MATH-312	Differential Equations		_____
MATH-342	Probability		_____
MATH-381	Math Modeling		_____
MATH-423	Real Analysis		_____
*Select **one** of the following:*		*4*	_____
ISCS-210	Python Programming		_____
IIPHYS-342	Data Analysis for Scientists		_____
Total Credits		**48**	_____

Teacher Certification

Students pursuing this program who intend to teach either at the secondary or elementary level must meet the applicable requirements for teacher certification. Refer to the Educator Preparation section of this catalog for information on these requirements, including courses that are to be included as part of the Integrative Studies Program requirements.

Dual Major in Education

- Secondary Education (for secondary school mathematics teaching)
- Elementary Education (for elementary school teaching)

Electives

Select courses to reach a total of 120 credits for the degree.

Degree Requirements

120 credits
40 credits at the upper-level

Upon completion of the Mathematics B.A. degree, students will gain:

- Technical skill in completing mathematical processes; By technical skill we mean both the ability to correctly apply standard algorithms found in the undergraduate mathematics curriculum as well as the ability to choose an appropriate algorithm.
- Breadth and depth of knowledge of mathematics; By breadth we mean work in both the applied and pure areas of mathematics. By depth we mean the ability to recognize, represent, and connect mathematical ideas in multiple ways; the ability to reason both inductively and deductively; and the ability to meaningfully engage in the pocess of mathematical problem solving.
- An understanding of the relationship of mathematics to other disciplines.
- An ability to communicate mathematics effectively, both orally and in writing.
- A capability of understanding and interpreting written materials in mathematics.
- An ability to use technology to do mathematics.