

APPLIED AND COMPUTATIONAL MATHEMATICS

This major is designed to give students an understanding of essential areas used in the application of mathematics. It allows students to use upper-division electives to prepare themselves for specific career options, including work with technological firms, the insurance industry, government services, or financial/investment institutions. Courses are offered in many areas and are taught by a faculty of research mathematicians.

BACHELOR OF ARTS (BA) GENERAL OVERVIEW

Four lower-division mathematics courses:

- Calculus I, Calculus II, and Calculus III
- Linear Algebra and Linear Differential Equations

One computing course. Examples include:

- Fundamentals of Computation
- Programming in Python
- Introduction to C++ Programming

Four upper-division mathematics courses. Examples include:

- Theory of Numbers
- Introduction to Differential Geometry
- Mathematics of Physics and Engineering II
- Theory and Computational Methods for Optimization

Two upper-division core courses:

- Probability Theory
- Numerical Methods

Three quantitative elective courses:

- Three additional quantitative courses approved by the mathematics department; one must be an upper-division course

Additional Bachelor of Science (BS) requirements:

- Mathematical Statistics
- Fundamental Concepts of Analysis A
- Logical Reasoning elective
- One additional quantitative elective course outside mathematics
- One fewer upper-division Mathematics elective than the BA

ACADEMIC OPPORTUNITIES

William Lowell Putnam Competition: An annual contest for college students that gives teams the opportunity to win up to \$25,000.

Pi Mu Epsilon: This undergraduate math honor society focuses on contest problem solving as well as mathematical games and puzzles. Students have participated in the William Lowell Putnam competition and the National Science Foundation-funded Research Experience for Undergraduates.

Study Abroad: Spend one or two semesters abroad at noted universities in a variety of locations, including the United Kingdom, Australia, South Korea, or South Africa.