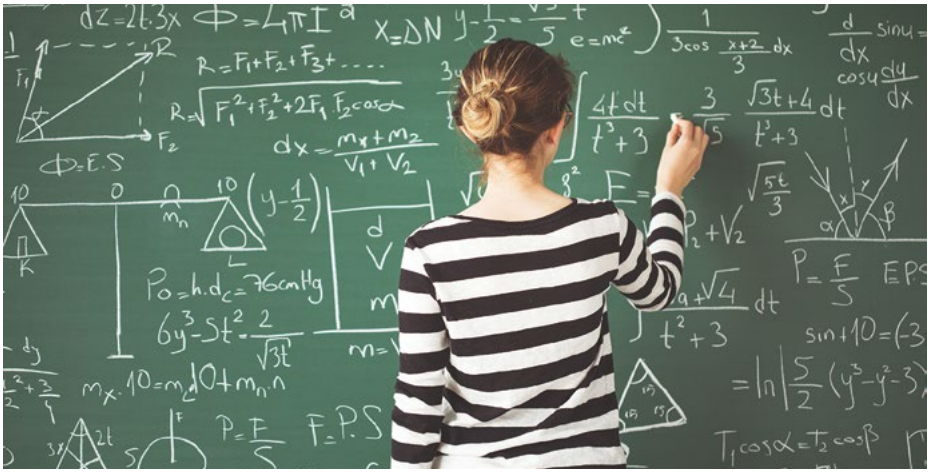
0918

Bachelors in
Mathematics



WHAT DO STUDENTS LEARN?

At Chatham, you will explore the principle branches of mathematics, including calculus, algebra, probability and statistics, and analysis, with emphasis on applications of mathematics to the sciences and social sciences. You will work closely with a dedicated faculty with opportunities to apply what you learn in research programs and beyond.

WHAT DO GRADUATES GO ON TO DO?

Our mathematics program will prepare you for graduate or engineering study, a career in a wide range of industries including business and healthcare data analysis, or for elementary or secondary teaching certification. The US Bureau of Labor Statistics reports that jobs in the areas of mathematics and statistics are expected to grow much faster than average for the upcoming few years. Through Chatham's Integrated Degree Program, you could earn your bachelor's degree in mathematics and Master of Arts in Teaching from Chatham in as few as five years.

chatham® UNIVERSITY

Mathematics

During your time at Chatham, you will extend your knowledge of mathematics to its connections with science and computing, allowing you to use scientific methods of the highest ethical standards in designing algorithms and executing computational schemes. You will acquire an appreciation for proofs, applications, logic, and research methods while demonstrating high-level skills in numerical, algebraic, and calculus manipulations in the use of mathematical notation, spatial reasoning, and computer programming.

PROGRAM HIGHLIGHTS

- You can expect to learn mathematics from motivated instructors who combine lectures with computer learning and student presentations. When you major in mathematics, you will receive a great deal of personal attention, considering that higher-level courses often enroll only 3-7 students.
- You can also leverage Pittsburgh's tight-knit academic community through connections our faculty has around the region.
- Students in the mathematics program will have the opportunity to participate in the COMAP competition to solve real-world problems, attend conferences of Pi Mu Epsilon, the mathematics honorary society, as well as presenting papers as part of the Mathematical Association of America.
- The Chatham Science Complex, home to the mathematics department, consists of the renovated Buhl Hall and new 10,000 square-foot laboratory building connected to Buhl by a three-story glass atrium. The complex contains specialized research spaces, laboratories and classrooms; a range of modern analytical equipment including cell and tissue culture facilities, fluorescence microscope, spectrometers (nuclear magnetic resonance, UV-VIS, IR, etc.), and one of the few drift tube mass spectrometers in the country.

SAMPLE COURSES

The History and Theory of Numbers

A survey of the history of our number system and theory of numbers. Topics covered include the development of number systems and mathematics from before the sixth century to the present, divisibility, factorization, arithmetic functions, quadratic reciprocity, primitive roots, and diophantine equations.

Probability

An introduction to the theory of probability and the role of proofs in mathematics. Topics include discrete and continuous probability functions, random variables, expectations, moments, moment generating functions, the central limit theorem, and Chebyshev's inequality. Applications of probability such as queuing theory, Markov processes, and reliability theory also will be covered.

Numerical Methods and Mathematical Modeling

Numerical methods and mathematical models used in computational science, including techniques for solving scientific problems, scientific visualization, and vector, parallel, distributed and massively parallel architecture.

▶ **www.chatham.edu/math/curriculum.cfm**

AFTER GRADUATION

Graduate schools to which students have been accepted:

- Ludwig-Maximilians-Universität München
- Notre Dame
- Nova Southeastern University

Places of employment:

- Propel Schools
- FujiFilm
- CMMI Institute
- Ohio University
- rue21

"I maintain a good sense of the mathematical backgrounds and abilities of my students. It's my responsibility to give these students the best possible chance for success through both my teaching and tutorial advising."

— **AARON TROUT, PH.D.,** *assistant professor of mathematics*

Apply online at apply.chatham.edu

LEARN MORE

Chatham University
Office of Admission
Woodland Road
Pittsburgh, PA 15232

800-837-1290 or 412-365-1825
undergraduate@chatham.edu

Read faculty bios, browse course descriptions, and learn about program requirements at
chatham.edu/math