

Mathematics



Program Overview

Capital University's mathematics program combines a strong liberal arts tradition with a strong foundation in classic and contemporary mathematical topics. Mathematics majors typically begin their studies with a two-course sequence in calculus and mathematical proofs. Required courses at the intermediate level include linear algebra, abstract algebra, mathematical statistics, differential equations, and a third course in calculus. We offer additional electives in combinatorics, real analysis, and intermediate statistics, as well as requiring at least one programming course. Our mathematics major with education licensure is intended for those who wish to pursue a license to teach mathematics in grades 7-12 in the schools of Ohio. The program combines of the math major requirements and the education department's requirements for Adolescent to Young Adult teacher licensure program, with the addition of required courses in college geometry and the history of mathematics. The department also offers minors in Computer Science, Computational Science, Data Science and Physics.

Careers and Placement

Graduates of Capital's mathematics program have gone on to complete graduate degrees in mathematics or related disciplines such as computer science and engineering. Those who enter the workforce after graduation have found success in a variety of careers that require the ability to solve problems, including systems analysis, actuarial science, business analytics, data science, bioinformatics, research and development, teaching and quality control. Companies our graduates have found work at include AEP, Nationwide Children's hospital, Safe Auto, GE Lighting System, Huntington Bank, Chase Bank, Daytronic Corporation, IBM, AT&T, Battelle Memorial Institute, Cynergy, Sterling, and in public and private school systems in the state of Ohio.

Experiential Learning

The university's location in the state capital allows majors to take advantage of the city's business and technological opportunities through internships and part-time employment while they are undergraduates. Many students work as laboratory supervisors or paid tutors on campus. During their junior and senior years, students participate in a departmental seminar that features students' research and presentations.

What Our Grads Are Doing Now:

Design Engineer

Vice President and Controller

Materials Manager

Actuarial Work

Secondary School Teacher

Finance

You'll Be Prepared To:

- Solve problems using standard operations on fundamental mathematical objects while showing the connection to the ideas and theories behind these operations
- Formulate and analyze quantitative models to solve real world problems using mathematical and statistical techniques
- Apply technology to analyze data and solve mathematical problems
- Communicate quantitative ideas both orally and in writing to a range of audiences
- Identify, explain, and evaluate the ethical implications that arise from the quantitative models they develop and apply

Mathematics

Four Year Sample Curriculum

First Year, Fall

Calculus
College Reading & Writing
Global Awareness
First Year Seminar
Elective

First Year, Spring

Calculus
Oral Communication
Mathematical Proofs
Psychology
Elective

Second Year, Fall

Religion
Cultural Pluralism
Linear Algebra
Science & Technology
Elective

Second Year, Spring

Calculus
Fine Arts
Geometry
Computational Science
Lab Science

Third Year, Fall

Mathematical Statistics
Lab Science
Social Science
Electives

Third Year, Spring

Abstract Algebra
Humanities
History of Mathematics
Seminar
Elective

Fourth Year, Fall

Mathematics Elective
Seminar
Electives

Fourth Year, Spring

Humanities
Ethical Issues
Differential Equations
Seminar
Elective

All courses subject to availability and advisor approval. All undergraduates must demonstrate that Signature Learning goals have been met.

Summer Scholars

Program Specific Organizations

Kappa Mu Epsilon

Student Government

Symposium on Undergraduate Scholarship



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Learn More



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