

# MATHEMATICS

Mathematics majors focus on the study of pure math – the theory and processes that are used to determine quantities, forms, and symbolic logic - in everything from algebra to calculus. Mathematics students use the language of math to solve abstract concepts and measure the world around us, which leads to a range of career opportunities and graduate study.

## STUDENT EXPERIENCE

### Learn and Do More at RWU

With a focus on experiential learning at RWU, Mathematics majors:

- Work on research with faculty members who are experts in their field. Students regularly co-author papers in national journals and participate in competitions. An RWU student recently earned the top prize in the Mathematical Association of America's History of Mathematics essay contest.
- Sharpen their research presentation skills at national conferences like the national Joint Mathematics Meeting.
- Share their knowledge and skills, and develop their teaching capacity, by serving as math tutors on campus.
- Network with math peers and faculty at universities around the country through the Mathematics Honor Society.



+ Do you love solving puzzles and logic games?

+ Do you find yourself discovering patterns in your surroundings or activities?

## CAREER OUTLOOK

RWU **Mathematics** alumni are working in these organizations:

- AT&T
- Raytheon
- HBO Company
- Financial companies on Wall Street
- School districts

## ALUMNI SPOTLIGHT

“The math program at RWU prepared me for my career by helping me develop technical skills, problem-solving ability, and analytical thinking. My professors, courses, research, and other campus involvement gave me a well-rounded experience and prepared me to successfully apply what I'd learned to the real world.”

Kaia Lindberg '19  
Mathematics  
Development analyst at  
Liberty Mutual Insurance

## CURRICULUM

The Mathematics major prepares students for a variety of careers in industry and government, as well as graduate study. The flexibility of the program allows for a broad choice of electives. When combined with a second area of focus, the program provides an excellent foundation for graduate or professional study in the physical sciences, computer science, engineering, or business.

### Course Sequence

The major consists of 10 required courses, beginning with a two-semester calculus sequence. This is followed by a four-course Mathematics core and two Mathematics electives. The capstone course is a problem-solving seminar, which is designed to draw upon all courses from the foundation and to develop abilities in mathematical reasoning. Students are further encouraged to include courses in math modeling, science, and the history of mathematics.

### Senior Thesis

In our senior thesis course, students participate in mathematical investigation and exposition, working in conjunction with a math faculty member on research questions. They present their findings in both writing and in public presentations. Our students regularly co-author research papers that are published in mathematical journals and present papers at national conferences.

### Research Opportunities

Students are encouraged to collaborate with faculty on undergraduate research projects. These are just some of their research areas:

- The Libra Astronomica and Its Mathematics
- Foundations of General Relativity & Speculation on Einstein-Grossman Collaboration
- Numerical Solution for the Helmholtz Equation for the Superellipsoid: Mars Project
- A Mathematical Model of the Effects of Transcranial Stimulation on Neuronal Electrodynamics
- Do Microsoft Sales Drive the Client to Upgrade their Operating System?
- Fixed Points in Affine Cipher

### Math and Secondary Education Dual Major

A dual degree in Mathematics and Secondary Education prepares you to become a secondary school teacher in Mathematics. The program includes field experience and student teaching to help you gain the deep subject matter knowledge and real-world teaching experience needed to be a successful teacher. Many of the courses satisfy the requirements of both majors, making it easy to complete the dual degree program in four years.

## OVER 80% OF RWU STUDENTS GRADUATE WITH MORE THAN JUST A SINGLE MAJOR

Design your experience with your passion and have a unique career advantage with a minor or double major. Many students combine **Mathematics** with:

- Economics
- Accounting
- Engineering
- Computer Science
- Secondary Education

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