



# The School of Science

## BACHELOR OF SCIENCE IN MATHEMATICS with an optional concentration in Statistics

Opportunities abound for math majors and statistics majors in the fields of technology, education, business, government, the arts, and in many other professions. Graduates of the mathematics program at Monmouth University have pursued a variety of careers in teaching, business, and in other technical fields. Employers are looking for people who can think logically and provide a unique perspective in solving problems. A bachelor's degree in mathematics prepares students to do this.

In today's world, with computers on nearly every desktop, the ability of the mathematician to do routine computations has become less important. What is needed is the ability to analyze a problem by examining the mathematical components that are involved. Whether it's computing the optimal path of an airline's routes or the minimal surface needed to cover a given frame, the mathematician is prepared to solve a wide range of problems using a variety of techniques.

At Monmouth, mathematics majors begin with calculus and a unique course in mathematical reasoning. Rather than listening to lectures, students often work in groups within small classes, attacking complex problems that bring out principal ideas. In addition, computers are often used as a mathematical laboratory, enabling students to perform experiments

and make conjectures. These courses and experiences help provide a foundation for the more advanced courses in the programs. This includes courses in differential equations, number theory, real and complex analysis, and, for those pursuing our concentration in Statistics, regression and time series analysis.

Mathematics majors at Monmouth also have an extracurricular advantage in the Mathematics Learning Center, where they have the opportunity to reinforce their own learning by tutoring students in lower-level math classes. In addition, students may fulfill their experiential education requirement by taking a mathematical modeling course in which a real-world situation is studied, simplified, and abstracted to the point that mathematical tools can be applied to gain understanding. In this class the students work in teams investigating problems from local industries or organizations.

### Career Preparation

Currently, many graduates with mathematics degrees are responding to the great need for mathematics teachers and finding employment in the field of education. Future teachers benefit from learning mathematical skills in the classroom with faculty who are themselves dedicated teachers. For those who will seek employment in other fields, mathematics is a respected major that provides a base for future learning in many areas of business and industry with technical aspects. Our concentration in Statistics is an especially attractive program for students entering business and industry. Graduates who wish to pursue advanced degrees will benefit from the program's broad focus on pure and applied mathematics and statistics—a great foundation for a master's or doctoral degree in mathematics or statistics.

### valuable online resources

- Apply Online
- Curriculum Charts
- Department Faculty Members
- [www.monmouth.edu/mathematics](http://www.monmouth.edu/mathematics)

**For complete information on all undergraduate programs within the School of Science, please visit [www.monmouth.edu/school-of-science/programs-of-study/](http://www.monmouth.edu/school-of-science/programs-of-study/).**