

Mathematics

Careers in Mathematics

In the past 30 years demand for mathematicians at all levels of training has dramatically increased.

Graduates of Sonoma State University's Mathematics Programs are now employed in teaching, industry, and government in positions that range from purely scientific work to business applications. They are engaged as analysts, statisticians, actuaries, accountants, and computer professionals. Many of our graduates are now teaching at high schools, community colleges and universities.

Graduates with a degree in mathematics are also sought after in many areas, including law or business, where mathematics per se may be of less importance, but clarity of thinking is essential.

Our program is also an excellent foundation for graduate study in mathematics and engineering. Our graduates are welcomed at research institutions where they achieve degrees beyond the bachelor's, and pursue careers in university-level teaching and basic research.

THE MATHEMATICAL SCIENCES PROGRAMS

B.A. in Mathematics • This is the most flexible of mathematics degree programs. Required core courses include calculus, logic and proof, linear algebra, modern algebra, real analysis, probability, and numerical analysis. There are 6 units of electives, which could include combinatorics, topology, geometry, number theory, statistics, operations research, and other courses. Course work in this program is basic to any further study in mathematics.

Secondary Teaching Program for B.A. in Mathematics • The Waiver Program consists of 48 to 50 units in mathematics. Students completing this program will receive a B.A. in mathematics and satisfy all the single subject requirements for teaching mathematics in secondary schools. This is one of our most popular programs.

B.S. in Mathematics • Students choose from three areas of specialization:

Concentration in Applied Mathematics: Includes courses in differential equations, graph theory, modeling, partial differential equations, integral transforms, and complex variables.

Concentration in Computer Science: Includes courses in C++, graph theory, assembly language, data structures, and operating systems.

Concentration in Statistics: Includes courses in design of experiments, decision theory, modeling, and non-parametric methods.

MINOR IN MATHEMATICS

Twenty units of mathematics are required. These must include MATH 161 (or its equivalent). Six of the twenty units must be upper division courses and may not include MATH 300.

COOPERATIVE MASTER OF ARTS IN MATHEMATICS

The Department of Mathematics participates in a Cooperative Master of Arts in Mathematics with San Francisco State University. Students may complete up to 12 units of course work in residence at Sonoma State University. Students interested in this cooperative program should contact the Chair of Mathematics Department for further information.

SPECIAL FEATURES

The Mathematics Department is a dedicated and enthusiastic community of scholars and teachers. Small class size and extensive student-teacher contact provide an environment for maximal intellectual growth and achievement. The Mathematics Department strongly encourages cooperative learning among students and active learning in the classroom. The Department faculty staff a Mathematics Assistance Center where any student can get help or engage in a lively conversation on Mathematics.

Since 1974, the Department has hosted a weekly afternoon series of popular lectures on pure and applied mathematics, featuring speakers from leading educational institutions and industries. Students and educators throughout the area find the M*A*T*H Colloquium a stimulating way to learn about new developments.

Sonoma students are active in the national Putnam mathematics competition, sponsored by the Mathematical Association of America, and consistently receive high rankings. Students and faculty also actively participate in the Women and Mathematics Program. Also, students have formed two



clubs, the SSU Math Club and the SSU Stats Club, which sponsor speakers and a variety of activities. Once each year, the Department hosts an SSU Mathematics Festival to coincide with the National Mathematics Awareness Week. The Festival features day-long exhibits, an awards ceremony, lectures by visiting mathematicians, and a mathematics alumni dinner.

Computing Services

Computing Services at Sonoma State University offer students access to state-of-the-art computer systems. There are numerous microcomputer laboratories containing IBM PCs and Macintoshes.

An Invitation

Those interested in the popular lecture series, the M*A*T*H Colloquium, or other special events such as the annual Spring Mathematics Festival sponsored by the Mathematics Department should contact the department secretary at 707 664-2368.

We hope this information will be helpful. Official requirements of all majors and programs are published in the Sonoma State University catalog. Sonoma State University is an Affirmative Action/Equal Opportunity Institution and has a strong commitment to the principal of diversity.
A member of the California State University

