Mathematics, BS, BA

Emphases: Computational Mathematics; Actuarial Science
Department: Mathematics and Statistics Department
College: College of Science

Overview

About This Degree

USU's undergraduate degree in mathematics is a versatile program where students have a large variety of options as they study different areas in mathematics. The department is a close-knit unit where students receive individual attention from faculty mentors and the opportunity to pursue undergraduate research.

Students receive a **BS** by completing all required courses in the major. To receive a **BA**, students must also gain proficiency in one or more foreign languages.

Students can complete the mathematics degree without an emphasis where they will gain a solid education in mathematics areas, including algebraic structures, analysis/advanced calculus, complex variables, partial differential equations, and more. This degree path is a broad choice where students have many elective options, and it also serves as solid preparation for graduate school, both in mathematics and statistics, but also in engineering and medical school.

Students can also do an applied mathematics option, which is not an official emphasis, where students take courses in computer science and physics to learn how to use mathematics in applied settings solving real problems. This option makes students more marketable for careers once they graduate.

Career Options

With a degree in mathematics, students can work as mathematicians or analysts in the following areas:

- Aerospace and transportation equipment manufacturers
- Chemical and pharmaceutical manufacturers
- Communications service providers
- Computer service and software firms
- Electronics and computer manufacturers
- Energy systems firms
- Engineering research organizations
- Financial service and investment management firms
- Pharmaceutical research and development

Computational Mathematics Emphasis

Students who graduate with an emphasis in computational mathematics can work in all of the areas listed above, but more commonly have careers with a focus on computers and computer science.

Actuarial Science Emphasis

Students who graduate in actuarial science work as actuaries in the following areas:

- Insurance companies
- Banks
- Finance industry

Career Services provides counseling and information on hundreds of job and internship opportunities and even helps students apply and interview.

What it takes

Admissions Requirements

In addition to Utah State University's admissions requirements, the mathematics program has additional requirements:

- **Freshmen:** New freshmen admitted to USU in good standing qualify for admission to this major.
- **Transfer students:** Transfer students from other institutions and students transferring from other USU majors need a 2.2 total GPA to be accepted into the program.

International students have additional admissions requirements.

Major Requirements

Click here to see course requirements for the **Bachelor of Science**.

Click here to see course requirements for the **Bachelor of Arts**.

Contact

Advising

All new USU students participate in a New Student Orientation program, where they receive detailed information about major requirements, registering for classes, and other important advising information.

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Get Involved

Professional Organizations, Honor Societies, and Clubs

American Mathematical Society: AMS is the largest organization of research mathematicians. The society's programs and services for its members and the global mathematical community include professional programs, publications, meetings and conferences, support for young scholars programs, tools for researchers and authors, and a public awareness office that provides resources to members, students, teachers, the media, and the general public.

Mathematical Association of America: MAA is the largest professional society that focuses on mathematics accessible at the undergraduate level. Its members include university, college, and high school teachers, graduate and undergraduate students, pure and applied mathematicians, computer scientists, statisticians, and many others in academia, government, business, and industry. MAA is focused on teaching, particularly at the high school and college levels.

Math Club: This club enables students interested in mathematics to network and be educated in a fun, non-classroom environment. Members have the opportunity to listen to unique guest speakers who are experts in the field of mathematics and statists.

Labs, Centers, Research

With the second oldest undergraduate research program in the nation, USU offers students a wide range of opportunities to gain hands-on research experience. The Undergraduate Research and Creative Opportunities program allows students to apply for grants and receive funding. USU's Honors Program prepares students for excellent graduate programs by helping them build relationships with professors, participate in research projects, take smaller, more intensive classes, and develop leadership skills.