Mathematics is the universal language essential to formulate and express ideas in science and engineering. As our society becomes more sophisticated and technical, mathematics is playing increasingly important roles in other areas such as business and the social sciences as well. As probably the oldest and most basic science, it provides the foundation for the major technological achievements of our time.

**Mathematical Sciences at UT Dallas**

Students must take 120 hours to graduate: 42 from the University's core curriculum and 48 hours in the major, plus elective requirements, where students can tailor their learning experience more closely to their interests. Students seeking BS in Mathematics may choose from the following three specializations.

**Mathematics Specialization:** For students interested in a career in mathematics and for those who choose to continue their education at the graduate level in mathematics, applied mathematics, mathematics education or disciplines, such as statistics and actuarial science, that use mathematics.

**Statistics Specialization:** For students interested in probability and statistical models and their use in data analysis and decision making and for those interested continuing on to graduate education in statistics or data science.

**Applied Mathematics Specialization:** For students interested in mathematics for the purpose of using it broadly in various application areas and for students interested in continuing on to graduate work in applied mathematics or related disciplines such as engineering.

**Career Opportunities**

UT Dallas graduates with degrees in mathematics leave the university well prepared for graduate school or careers in a business or technical environment. The jobs of people trained in mathematics and related disciplines, such as those of a mathematician, statistician and actuary, consistently appear among the top jobs in the rankings of 200 jobs by CareerCast’s Jobs Rated Almanac based upon factors such as work environment, income, hiring outlook and stress.

**Marketable Skills**

Students take a full spectrum of classes in mathematics, including ones which require formal arguments and proofs and full mathematical rigor. Upper division classes vary according to the specialization chosen by the students. Students obtain training and preparation for a number of careers requiring quantitative and analytic skills, including teaching. The curriculum prepares students to obtain graduate degrees in mathematical sciences and STEM disciplines.

- Ability to choose the right mathematical methods or formulas to solve a problem; ability to utilize algebraic and discrete methods to formulate hypotheses and solve problems in a broad range of situations; ability to utilize analytical and geometric methods to produce precise solutions to mathematical problems and applications.
- Analytical and logical reasoning; deductive reasoning; problem solving; pattern recognition and inductive reasoning. Specialized knowledge of mathematical theories, methods and tools.
- Modeling of real-world problems to obtain meaningful conclusions; computer proficiency in MATLAB or R; statistical analysis of data; manipulate quantitative data; computational skills.
UT Dallas’ School of Natural Sciences and Mathematics offers degree programs for undergraduate and graduate students in biology, chemistry, geosciences, mathematics and physics. In addition to regular coursework, undergraduates are encouraged to participate in research alongside the faculty and graduate students. From the world-renowned Alan G. MacDiarmid NanoTech Institute, headed by Dr. Ray Baughman, to the William B. Hanson Center for Space Sciences—where Dr. John Hoffman helped discover water on Mars—the science education at UT Dallas is a hands-on, high quality experience for undergraduates and graduate students alike.

The UTeach Dallas program offers students the opportunity to complete the requirements for high school teacher certification along with their regular BS or BA degrees.

Quick Facts about the School of Natural Sciences and Mathematics

- Established in 1975.
- Six departments.
- More than 3,200 students.
- 29 degrees offered.
- Faculty include a Nobel Prize winner and a member of the National Academy of Engineering.

Degrees Offered

**Bachelor of Science:** Actuarial science, biochemistry, biology, chemistry, data science, geosciences, mathematics, molecular biology, physics

**Bachelor of Arts:** Biology, chemistry, mathematics, physics

**Master of Science:** Actuarial science, bioinformatics and computational biology, biotechnology, chemistry, geosciences, mathematics, molecular and cell biology, physics, statistics

**Master of Arts:** Teaching in mathematics education, teaching in science education

**Doctor of Philosophy:** Chemistry, geosciences, mathematics, molecular and cell biology, physics, statistics

Certificates

Postbaccalaureate certificate in biomedical science
Graduate certification in data science

Fast Track to Graduate School

The Fast Track program enables exceptionally gifted UT Dallas students to include master’s level courses in their undergraduate degree plans. Students who meet the requirements for admission to graduate school and the minimum GPA requirement for their major can take up to 15 hours of graduate level coursework that can apply toward their undergraduate and graduate level coursework. To take graduate courses in the Fast Track program upper-division undergraduates must have completed 90 semester credit hours and petition their associate dean for permission to take graduate courses.