The Geosciences encompass a diverse array of disciplines in geology, geophysics, geochemistry, paleobiology, geomorphology and paleoclimatology, to name a few, with the aim of understanding the origin and evolution of Earth and other planetary bodies in our solar system. Geoscientists study the composition, structure, and DEEP TIME history of Earth. Research in the geosciences will play an increasingly important role in human sustainability including the transition to new energy sources and leads the way as we adapt to the rapidly changing global environments in which we live.

Geosciences at UT Dallas
The Bachelor of Science degree is intended for students who want to be practitioners of geology. Students generally should continue their studies in geosciences or closely related programs in graduate schools and attain an MS or PhD degree. Students must earn 120 hours to graduate: 42 hours from the University’s core curriculum, 58-64 hours in the major, plus elective requirements where students can tailor their learning experience more closely to their interests. Visit the GeoClub, a registered student organization devoted to promoting geoscience awareness and involvement within the University and the general community. facebook.com/groups/2210080549

High school students should have an aptitude for science and an interest in the physical world around them, including the environment and the outdoors in general. A background and associated interest in physics, chemistry and mathematics will help ensure success at the undergraduate level.

Career Opportunities
Jobs with local domestic oil and gas companies and environmental companies have been, in the recent past, relatively abundant for graduates with Bachelor of Science degrees. The MS degree does, however, remain the degree of choice for most employers in the oil and gas industry as well as mining and environmental industries, and BS degree recipients will be well-served to have as strong of a background in the supporting sciences and communication skills as possible.

Those working in environmental geology are advised to take the National Association of State Boards of Geology’s Fundamentals of Geology licensing exam during their senior year. The UT Dallas curriculum strives to address areas covered in this exam.

Job opportunities exist in:
Environmental, energy and mineral resources industries. Government agencies associated with natural resources, environmental concerns and the impacts of climate change. Occupations concerned with law, management, economics and environmental management.

Marketable Skills
The BS in Geosciences degree program provides students with a broad introduction to the geosciences and includes a rigorous scientific education in Mathematics, Chemistry and Physics. Upon successful completion of the BS in Geoscience degree program, UT Dallas graduates will receive a basic foundation in geoscience to prepare them for graduate studies in geoscience, for entrance way professional careers in several geoscience areas, for secondary school teaching, and for employment as research assistants in government, and environmental science laboratories. Graduates’ skills include:

• Broad knowledge base of geology with demonstrated ability to describe and analyze the major concepts and empirical findings in modern geoscience investigations, with an emphasis on geophysics, tectonics, environmental geochemistry, and earth history, with a sufficiently quantitative background. This knowledge base includes a firm grasp of the important concept of anthropologic-induced global climate change and the impending challenges facing all Earth’s biologic systems.
• Practical knowledge and experience in modern geoscience research methods with high level ability to define, apply and communicate basic modern geoscience research methods, including data analysis and interpretation
• Ability to work in teams in diverse settings in different circumstances
• Ability to recognize strong communication skills regarding scientific ideas and concepts expressed in oral and in written form
• Advanced ability to apply critical thinking and quantitative skills to solve complex problems: critical and creative thinking, skeptical inquiry, and knowledge of geoscience principles to analyze and solve problems
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.