School of Natural Sciences and Mathematics

The School of Natural Sciences and Mathematics offers both graduate and undergraduate programs in Biology and Molecular Biology, Chemistry and Biochemistry, Geosciences, Mathematics, and Physics, and a graduate program in Science Education. Certain options may exceed minimum requirements for a degree. Undergraduate and post-baccalaureate programs in teacher certification are administratively housed in the School of Natural Sciences and Mathematics but serve other schools as well.

The undergraduate programs in Biology and Molecular Biology provide a basic foundation in molecular and cell biology to prepare students for graduate studies in biological sciences (BS), for professional studies in a wide variety of health-related areas, for secondary school teaching, and for employment as research assistants in pharmaceutical, biotechnology, government, and environmental science laboratories (BS, BA).

The undergraduate programs in Chemistry and Biochemistry provide the fundamental knowledge required for professional participation in chemically oriented industries, for graduate study in chemistry, and for medical or dental studies (BS), or for secondary science teaching or ancillary positions (sales, legal, etc.) in the chemical industries (BA).

The undergraduate program in Geosciences provides a general scientific background suitable for some careers in business or law, for secondary school teaching, or for employment as a professional geologist, or for graduate studies in Geosciences (BS).

The undergraduate programs in Mathematics (BS, BA) encompass Mathematics, Statistics, and Applied Mathematics, and are designed so that students can have the opportunity to prepare for employment immediately upon graduation in a broad range of positions in business, industry, government, and education - or for continuing with graduate studies in any of these areas.

The undergraduate program in Actuarial Science (BS) provides a rigorous mathematical background with special courses in finance, economics, applied statistics, insurance, and actuarial science devoted to preparing students for actuarial exams.

The undergraduate Physics program offers a basic foundation in classical and modern physics for students interested in professional careers in physics, usually requiring graduate degrees, as well as in related fields, e.g., electrical engineering, medical physics, radiology, lasers, geophysics, computer science (BS), or a strong base in physics for students seeking to pursue careers in medicine, patent law, government or industrial laboratories, or secondary school teaching (BA).

The School of Natural Sciences and Mathematics also provides opportunities for students to complete Texas Teacher Certification requirements in Life Science, Chemistry, Physical Science, Composite Science, and Mathematics. Students who wish to be certified should consult the UTeach Dallas for specific requirements as soon as possible after formal admission to the University. Further details may be found in the Teacher Education Certification Programs section of the catalog.
Major Honors

The Departments of the School of Natural Science and Mathematics offer the opportunity for outstanding students to graduate with Honors or Honors with Distinction in their major. The program provides for these students to work individually with faculty for an in-depth experience in research.

Eligibility requirements include:

- at least 30 graded semester credit hours of coursework at UT Dallas with a cumulative grade point average of 3.750,
- at least 12 semester credit hours of upper-division courses in the student’s major with a grade point average of 3.750 overall the upper-division courses in the major, and
- completion of an honors thesis evaluated by two faculty members with a grade of at least B+.

The thesis should be submitted at least three weeks prior to the last day of classes of the term. It is then critiqued by the faculty mentor, returned to the student for revision and resubmission by the last day of classes of the term.

Honors with Distinction will be awarded to students whose theses are judged by a faculty committee of at least three members to be of exemplary quality, and if carried to fruition, would warrant publication in a journal in the field of work.

Minors

To minor in the School of Natural Sciences and Mathematics, students must take a minimum of 18 semester credit hours for the minor, 12 of which must be upper-division semester credit hours. Students who take a minor will be expected to meet the normal prerequisites in courses making up the minor, and should maintain a minimum GPA of 2.000 on a 4.00 scale (C average). Semester credit hours may not be used to satisfy both the major and minor requirements; however, free elective semester credit hours or major preparatory classes may be used to satisfy the minor. Students must complete all prerequisite sequences for required minor courses for all minors in the School of Natural Sciences and Mathematics. Students may choose to minor in any of the following fields of study:

- Actuarial Science
- Biology
- Biomolecular Structure
- Chemistry
- Geosciences
- Mathematics
- Microbiology
- Molecular and Cell Biology
- Neurobiology
- Physics
- Statistics
Faculty


**Associate Professors:** Jung-Mo Ahn, Maxim Arnold, Michael C. Biewer, Thomas H. Brikowski, John G. Burr, Yan Cao, Lunjin Chen, Min Chen, Fabiano Da Silveira Rodrigues, Jeff L. DeJong, Nikki Delk, Gregg R. Dieckmann, Heng Du, Yuri Gartstein, Jeremiah J. Gassensmith, Warren J. Goux, Liang Hong, Tae Hoon Kim, Lindsay J. King, Yifei Lou, Oleg Makarenkov, Anton V. Malko, Steven O. Nielsen, Tomoki Ohsawa, Kelli Palmer, Paul Pantano, John W. Sibert IV, Jason D. Slinker, Ronald A. Smaldone, Anh Tran, Duane D. Winkler, Zhenyu Xuan

**Assistant Professors:** Carlos Arreche, Zachary Campbell, Sy Han (Steven) Chiou, Ronan Conlon, Sheena D'Arcy, Nicole De Nisco, Sheel Dodani, Michael Kesden, Michael Kolodrubetz, Jiyong Lee, Qiwei Li, Lloyd Lumata, Bing Lv, Stephen McKeown, Gabriele Meloni, Jyoti Misra, Faruck Morcos, Kaloyan Penev, Xiaoyan Shi, Sunyoung Shin, Russell Stoneback, Chuan-Fa Tang, Nathan Williams, Yunan Wu, Fan Zhang, Hejun Zhu

**Clinical Professors:** Natalia Humphreys, David Murchison

**Clinical Associate Professor:** Mohammad Akbar

**Clinical Assistant Professor:** Wenyi (Roy) Lu

**Research Assistant Professors:** Lan Guo, Li Liu

**Senior Lecturers:** Malgorzata Dabkowska, Rabin Dahal, William R. Griffin, Meenakshi Maitra, Neha Makhijani, Irina Martynova, Brady McCary, Ignacio Pujana, Yanping Qin, Ruben D. Ramirez, Kuei Sun, Tristan Whalen, Wen-Ho Yu

**Professors Emeriti:** Larry P. Ammann, Hans Bremer, Lee A. Bulla, Richard A. Caldwell, Austin J. Cunningham, David E. Dunn, Donald M. Gray, Walter Heikkila, George A. McMechan, Richard M. Mitterer, Patrick Odell, Emile A. Pessagno Jr., Dean C. Presnall, Myron B. Salamon, Brian A. Tinsley, John W. Van Ness

**Associate Professors Emeriti:** Gail A. M. Breen, Dennis L. Miller

**UT Dallas Affiliated Faculty:** Hervé Abdi, Titu Andreescu, Alain Bensoussan, Yves J. Chabal, Kyeongjae (K) Cho, John P. Ferraris, Massimo V. Fischetti, Heather Hayenga, Julia W. P. Hsu, Stefano Leonardi, Stephen D. Levene, Faruck Morcos, Lawrence J. Overzet, A. Dean Sherry, Mary L. Urquhart, Zhenyu Xuan
Michael Qiwei Zhang

**Professors of Instruction:** Manjula Foley, Bentley T. Garrett, Yuly Koshevnik, Paul Mac Alevey, Scott A. Rippel, Amandeep Sra, Uma Srikanth

**Associate Professors of Instruction:** Mohammad Ahsan, Kelly Aman, Mehmet Candı, Sergio Cortes, Anatoly Eydelzon, Sandhya R. Gavva, Wen-Ju Lin, Derege Mussa, My Linh Nguyen, Jigarkumar Patel, Elizabeth Pickett, Ilya Sapozhnikov, Michelle Wilson

**Assistant Professors of Instruction:** Anani Komla Adabrah, Iris Alvarado, Caitlin Braitsch, Hui Ding, Adannah Duruoha, Kemeli Estacio-Hiroms, Huizhen Guo, Ida Klang, Changsong Li, Iti Mehta, Jing Pan, Nimanka Panapitiya, Ajaya Paudel, Mortaza Pirouz, Eva Sadat, Subha Sarcar, Nasrin Sultana, Julie Sutton, Kristen Wetzler, Zhuoru Wu