

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 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](#)
- [Secondary STEM Education](#)

Faculty

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Professors: Phillip C. Anderson, Kenneth J. Balkus Jr., Ray H. Baughman, Swati Biswas, Lunjin Chen, Min Chen, Pankaj Choudhary, Gerardo Cisneros, Baris Coskunuzer, Mieczyslaw Dabkowski, Vladimir Dragovic, Shengwang Du, Sam Efromovich, John P. Ferraris, Yulia Gel, Matthew J. Goeckner, Juan E. González, David Hyndman, Mustapha Ishak-Boushaki, Michael Kesden, Wieslaw Krawcewicz, David J. Lary, Mark Lee, Xinchou Lou, David Lumley, Roger Malina, Anton V. Malko, Susan Minkoff, Inga H. Musselman, Bruce M. Novak, Kelli Palmer, L. Felipe Pereira, Dmitry Rachinskiy, Viswanath Ramakrishna, Lawrence J. Reitzer, A. Dean Sherry, Donal Skinner, Jason D. Slinker, Stephen Spiro, Mihaela C. Stefan, Robert J. Stern, Janos Turi, Robert M. Wallace, Anvar A. Zakhidov, Bei Zeng, Chuanwei Zhang, Fan Zhang, Li Zhang, Michael Qiwei Zhang, Jie Zheng, John Zweck

Associate Professors: Jung-Mo Ahn, Maxim Arnold, Michael C. Biewer, Joseph Boll, Thomas H. Brikowski, Mehmet Candas, Yan Cao, Sheena D'Arcy, Fabiano Da Silveira Rodrigues, Nicole De Nisco, Nikki Delk, Gregg R. Dieckmann, Sheel Dodani, Heng Du, Yuri Gartstein, Jeremiah J. Gassensmith, Warren J. Goux, Liang Hong, Tian Hong, Tae Hoon Kim, Lindsay J. King, Michael Kolodrubetz, Lloyd Lumata, Bing Lv, Oleg Makarenkov, Gabriele Meloni, Faruck Morcos, Steven O. Nielsen, Tomoki Ohsawa, Paul Pantano, Kaloyan Penev, John W. Sibert IV, Ronald A. Smaldone, Anh Tran, Duane D. Winkler, Zhenyu Xuan, Xiaojia Zhang

Assistant Professors: Carlos Arreche, Kristina Butler, Noirit Chandra, Ronan Conlon, Nicole De Nisco, Nicholas Dillon, Xintong Dong, Nadine Igonin, Lin Jia, Purna Joshi, Rizwanur Khan, Brandon Kim, Jiyong Lee, Qiwei Li, Stephen McKeown, Zihao Ou, Erica Sanchez, Darshan Sapkota, Yuki Shindo, Zachary Sickmann, Aaron Smith, Chuan-Fa Tang, Ivan Vasko, Jiayi Wang, Nathan Williams, Nan Wu, Yunan Wu, Yujie Zheng, Qingyu Zhu, dal138778, dal146814, jxs230052

Clinical Professors: Natalia Humphreys, David Murchison, Eberhard Voit

Clinical Associate Professor: Mohammad Akbar

Clinical Assistant Professor: Wenyi Lu

Research Professor: Roderick A. Heelis

Research Assistant Professors: Li Liu, Ru-Hung Wang

Senior Lecturer: Wen-Ho Yu

Lecturer: Kathleen McRoy

Professors Emeriti: Larry Ammann, Lee A. Bulla, Richard A. Caldwell, Austin J. Cunningham, John F. Ferguson, John W. Geissman, Robert Glosser, Donald M. Gray, Walter Heikkila, Ali Hooshyar, Joseph M. Izen, William I. Manton, George A. McMechan, Patrick Odell, Myron B. Salamon, Brian A. Tinsley, John Van Ness

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

UT Dallas Affiliated Faculty: Kyeongjae (KJ) Cho, Heng Du, John P. Ferraris, Massimo V. Fischetti, Heather Hayenga, Julia W. P. Hsu, Jung-whan (Jay) Kim, Stephen D. Levene, Lawrence J. Overzet, A. Dean Sherry, Mary L. Urquhart

Professors of Instruction: Anatoly Eydelzon, Manjula Foley, Bentley Garrett, Yuly Koshevnik, Paul Mac Alevey, Ignacio Pujana, Scott A. Rippel, Amandeep Sra, Uma Srikanth

Associate Professors of Instruction: Mohammad Ahsan, Kelly Aman, Mehmet Candas, Sergio Cortes, Malgorzata Dabkowski, Rabin Dahal, Sandhya R. Gavva, William R. Griffin, Yu Huang, Amena Khan, Wen Lin, Meenakshi Maitra, Derege Mussa, My Linh Nguyen, Jing Pan, Jigarkumar Patel, Elizabeth Pickett, Yanping Qin, Lamy Saleh, Ilya Sapozhnikov, Julie Sutton, Michelle Wilson, Wen-Ho Yu

Assistant Professors of Instruction: Anani Komla Adabrah, Iris Alvarado, Saikat Biswas, Stephanie Boyd, Anne Davenport, Hui Ding, Adannah Duruoha, Kemelli Estacio-Hiroms, Amy Jo Gomez, Huizhen Guo, Yi Huang, Shengjie Jiang, Roger Kadala, Joselle Kehoe, Ida Klang, Li Liu, Runzhou Liu, Meenakshi Maitra, Neha Makhijani, Irina Martynova, Caitlin Maynard, Simbarashe Mazambani, Iti Mehta, Diarisoa Mihaja Rakotomalala, Adrian Murza, Ramesh Padmanabhan, Jing Pan, Nimanka Panapitiya, Ajaya Paudel, Mortaza Pirouz, Ruben Ramirez, Eva Sadat, Subha Sarcar, Octavious Smiley, Nasrin Sultana, Michelle Wilson, Che-Yu Wu, Zhuoru Wu

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