School of Natural Sciences and Mathematics

The School of Natural Sciences and Mathematics (NS&M) houses six departments, each with graduate programs: Biological Sciences (MS, PhD); Chemistry and Biochemistry (MS, PhD); Geosciences (MS, PhD); Mathematical Sciences, emphasizing Applied Mathematics and Statistics and Actuarial Science (MS, PhD); Physics (MS, PhD); and Science and Mathematics Education (Master of Arts in Teaching). In addition, there are three interdisciplinary degrees offered: Bioinformatics and Computational Biology (MS) and Geospatial Information Sciences (MS, PhD). Each program is relatively small and thus able to provide excellent graduate student - faculty contact, while maintaining a strong research program. Increasingly, departments interact with each other in research, allowing interdisciplinary efforts to flourish. A number of well-funded Research Centers and Institutes are also housed in NS&M; these allow graduate students to approach real world, cutting edge research problems while working side by side with professional research staff and internationally recognized faculty. They are: the Center for Applied Biology; the Center for Lithospheric Studies; the UT Dallas NanoTech Institute; the Center for Quantum Electronics; and the Center for Space Sciences.

Degrees Offered

Biological Sciences

- **Master of Science in Bioinformatics and Computational Biology** (36 semester credit hours minimum)
- **Master of Science in Biotechnology** (36 semester credit hours minimum)
- **Master of Science in Molecular and Cell Biology** (36 semester credit hours minimum)
- **Doctor of Philosophy in Molecular and Cell Biology** (75 semester credit hours minimum beyond the baccalaureate degree)

Chemistry and Biochemistry

- **Master of Science in Chemistry** (30 semester credit hours minimum)
- **Doctor of Philosophy in Chemistry** (75 semester credit hours minimum beyond the baccalaureate degree)

Geosciences

- **Master of Science in Geosciences** (36 semester credit hours minimum)
- **Master of Science in Geospatial Information Sciences** (36 semester credit hours minimum)\(^1\)
- **Doctor of Philosophy in Geosciences** (75 semester credit hours minimum beyond the baccalaureate degree)
- **Doctor of Philosophy in Geospatial Information Sciences** (75 semester credit hours minimum beyond the baccalaureate degree)\(^2\)
Mathematical Sciences

**Master of Science in Actuarial Science** (36 semester credit hours minimum)

**Master of Science in Bioinformatics and Computational Biology** (36 semester credit hours minimum)

**Master of Science in Mathematics** (36 semester credit hours minimum)
- MS in Mathematics - Specialization in Applied Mathematics
- MS in Mathematics - Specialization in Engineering Mathematics
- MS in Mathematics - Specialization in Mathematics
- MS in Mathematics - Specialization in Data Science

**Master of Science in Statistics** (36 semester credit hours minimum)
- MS in Statistics - Specialization in Statistics
- MS in Statistics - Specialization in Applied Statistics
- MS in Statistics - Specialization in Data Science

**Doctor of Philosophy in Mathematics** (75 semester credit hours minimum beyond the baccalaureate degree)

**Doctor of Philosophy in Statistics** (75 semester credit hours beyond the baccalaureate degree)

Physics

**Master of Science in Physics** (30 semester credit hours minimum)

**Doctor of Philosophy in Physics** (75 semester credit hours minimum beyond the baccalaureate degree)

Science and Mathematics Education

**Master of Arts in Teaching in Science Education** (36 semester credit hours minimum)

**Master of Arts in Teaching in Mathematics Education** (36 semester credit hours minimum)

Interdisciplinary Studies

**Master of Science in Bioinformatics and Computational Biology** (36 semester credit hours minimum)

**Master of Science in Geospatial Information Sciences** (30 semester credit hours minimum)

**Doctor of Philosophy in Geospatial Information Sciences** (75 semester credit hours minimum beyond the baccalaureate degree)

Certificates Offered

- **Certificate in Data Science** (12 semester credit hours)

1. Program jointly offered by the School of Economic, Political and Policy Sciences and School of Natural Sciences and Mathematics.
Faculty


**Associate Professors:** Jung-Mo Ahn, Titu Andreescu, 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, Mary L. Urquhart, Duane D. Winkler, Zhenyu Xuan, xd131030

**Assistant Professors:** Carlos Arreche, Zachary Campbell, Sy Han (Steven) Chiou, Ronan Conlon, Sheena D'Arcy, Nicole De Nisco, Nikki Delk, Sheel Dodani, Michael Kesden, Michael Kolodrubetz, Jiyoung 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, Vinita Hajeri, Emily Hennessy, Meenakshi Maitra, Neha Makhijani, Irina Martynova, Brady McCary, Ignacio Pujana, Yanping Qin, Ruben D. Ramirez, Kuei Sun, Julie Sutton, Stephanie Taylor, Tristan Whalen, Wen-Ho Yu

**Master Teachers:** Katherine (Katie) Donaldson, Floyd Dorsey, Pamela (Pam) Kirkland, Amin Lalani, James (Jim) McConnell, Megan (Kate) York

**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, Leonidas Bleris, Yves J.

**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 Candas, 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, Hui Ding, Adannah Duruoha, Kemelli Estacio-Hiroms, Huizhen Guo, Ida Klang, Changsong Li, Caitlin Maynard, Iti Mehta, Jing Pan, Nimanka Panapitiya, Ajaya Paudel, Mortaza Pirouz, Eva Sadat, Subha Sarcar, Nasrin Sultana, Julie Sutton, Kristen Wetzler, Zhuoru Wu

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