ABOUT THE DEPARTMENT

Enrollments (Fall 2016):
- Foundational Freshmen: 268
- ChE Undergraduate: 275
- Master’s: 18
- Doctoral: 78

Tenure and Tenure-Track Faculty: 17

Endowed Chairs and Professors: 4

National Academy Members: 1

Research Expenditures (FY 16): $5.6M

DEGREES

Doctor of Philosophy in Chemical Engineering
Bachelor of Science in Chemical Engineering

150-Hour Combined B.S./M.S.

CONTACTS

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OVERVIEW AND RESEARCH

The Department of Chemical Engineering at Texas Tech University offers nationally ranked programs resulting in B.S., M.S. and Ph.D. degrees. The department has seen tremendous growth over the past ten years, doubling student populations and becoming a research-intensive department.

Overall faculty scholarship ranks 47th nationally according to Academic Analytics. Momentum continues to grow as we attract the very best students and faculty.

Research in the department covers a broad range of innovative experimental programs and state-of-the-art modeling and simulation activities. The M.S. and Ph.D. programs enable students to be involved in cutting-edge research in the following areas:

- Bioengineering
- Energy and Sustainability
- Polymers and Materials
- Simulation and Modeling in Chemical Engineering

Undergraduates are also strongly encouraged to participate in research, and a number of our undergraduate and graduate students have won national-level awards.

FROM HERE, IT’S POSSIBLE

Qian Tian won first place in the Student Poster Competition at the 2016 International Conference for Thermal Analysis and Calorimetry (ICTAC).

Mizanur Rahman won the Student Investigor Space Flight Award at the 2016 American Society for Gravitational and Space Research meeting; Jennifer Hewitt won second place in the poster competition.

The Car Team won the poster competition and took second place in the car competition at the 2016 AIChE Regional Meeting. The Jeopardy Team also placed second.

Hattie Schunk was named a 2016 Barry Goldwater Scholar. Hattie also received awards for Academic Excellence in Chemical Engineering in 2015 and 2016.

Michael Wurmstein won first place at the 2015 AIChE meeting in the Computing and Process Control category for his research poster. He took second place in 2016.

STUDENT TESTIMONIALS

“I found the courses to be really effective and useful.”

“Excellent working environment for research.”

“Seminars were thought-provoking and scientifically stimulating.”

“My advisor was a good mentor and leader. He motivated students to develop independent research skills.”

“I have always felt that everyone was here to help me succeed.”

“All the people in the department are very helpful and made my stay here wonderful.”
Chemical Engineering Research
Faculty Specializations

Dr. Ya-Wen (Winnie) Chang
Assistant Professor
Soft and living matter, cell organization and behavior, microfluidics and 3D printing

Dr. Chau-Chyun Chen
Professor and Jack Maddox Distinguished Engineering Chair in Sustainable Energy
Molecular thermodynamics, phase equilibria, process modeling

Dr. Gregory Fernandes
Research Assistant Professor
Solution and adsorbed polymer behavior, structure and dynamics of colloidal systems

Dr. Wei Li
Assistant Professor
Cell/polymer interaction, cell microenvironment, biomedical devices

Dr. Dr. Chau-Chyun Chen
Professor and Jack Maddox Distinguished Engineering Chair in Sustainable Energy
Molecular thermodynamics, phase equilibria, process modeling

Dr. Gregory B. McKenna
Horn Professor and John R. Bradford Chair in Engineering
Polymer and soft matter physics, rheology, nanotechnology, nanomechanics

Dr. Nuruqat Nuraje
Assistant Professor
Enhanced oil recovery, photocatalysis, renewable energy

Dr. Al Sacca Jr.
Dean of the Whitacre College of Engineering
Transition metal and acid catalysts, zeolite synthesis

Dr. Sindee L. Simon
Whitacre Department Chair and Horn Professor
Physics of glasses, nanoconfined reactions, calorimetry, dilatometry

Dr. Ronald C. Hedden
Associate Professor
Networks, gels, and elastomers, biofuels, polymer processing

Dr. Mark W. Vaughn
Associate Professor and Undergraduate Advisor
Nitric oxide in microcirculation, membrane transport

Dr. Chijuan Hu
Assistant Professor of Practice
Undergraduate teaching laboratories and biochemical engineering

Dr. Siva A. Vanapalli
Associate Professor
Microfluidics, mechanics of cells and biopolymers, colloidal assembly

Dr. Rajesh Khare
Professor and Graduate Advisor
Molecular simulations of polymers and soft matter, nanocomposites, rheology, separations

Dr. Brandon L. Weeks
Professor and Associate Dean for Research
High explosives, nanolithography, microcantilever, crystal growth

Dr. Sheima Jatib-Khatib
Assistant Professor
Heterogeneous catalysis, membrane reactors

Dr. Theodore F. Wiesner
Associate Professor
Solar energy, hydrogen production, CO₂ mitigation

Dr. Harvinder Singh Gill
Associate Professor
Drug and vaccine delivery, biomanufacturing, immunomodulation

Dr. Mark W. Vaughn
Associate Professor and Undergraduate Advisor
Nitric oxide in microcirculation, membrane transport

Dr. Harvinder Singh Gill
Associate Professor
Drug and vaccine delivery, biomanufacturing, immunomodulation

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