ABOUT THE DEPARTMENT

Enrollments (Fall 2017):
- Foundational Freshmen: 290
- ChE Undergraduate: 286
- Master's: 8
- Doctoral: 79

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
- Master of Science 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 Investigator 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.
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. Harvinder Singh Gill  
Associate Professor  
Drug and vaccine delivery, biopolymer microfluidics, immunomodulation

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

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

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

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

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

Dr. Harvinder Singh Gill  
Assistant Professor  
Heart valve degeneration: models, mechanisms and prevention

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

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

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

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

Dr. Jeremy Marston  
Assistant Professor  
Fluid and granular flows, cavitation, high speed imaging

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

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

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