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 17): $5.6 M

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
- Dr. Sindee Simon
  Whitacre Department Chair
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- Dr. Rajesh Khare
  Graduate Advisor
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- Dr. Mark Vaughn
  Undergraduate Advisor
  mark.vaughn@ttu.edu

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."

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. Momentum continues to grow as we attract the very best students and faculty.

The graduate programs in chemical engineering are dynamic and internationally visible. Our laboratory facilities support innovative experimental programs, and our computational resources are exploited for state-of-the-art modeling and simulation activities. The master’s and Ph.D. programs enable students to be involved in award-winning research in the following areas:

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

Undergraduates are also encouraged to conduct research for credit or compensation.

FROM HERE, IT’S POSSIBLE

Qian Tian won first place in the Student Poster Competition at the International Conference for Thermal Analysis and Calorimetry (ICTAC). Qian is supervised by Dr. Sindee L. Simon.

The Car Team won first place in the poster competition and second place in the car competition at the AIChE Regional Meeting in April. The Jeopardy Team received second place.

Hattie Schunk has been named a 2016 Barry Goldwater Scholar. Hattie also received a 2015 Award for Academic Excellence in Chemical Engineering from the Department.

Rodney Priestley graduated with a BSChE in 2003, performing undergraduate research with Dr. McKenna. He received his Ph.D. from Northwestern and now is a tenured faculty member at Princeton University.
Chemical Engineering Research
Faculty Specializations

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

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

Dr. Harvinder Singh Gill
Assistant Professor
Drug and vaccine delivery, biosurfaces, immunomodulation

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

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

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

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

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

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

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

Dr. Rajesh Khare
Associate Professor
Molecular dynamics and simulations of polymer and soft matter

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

Dr. Carla Lacerda
Assistant Professor
Mitral heart valve degeneration: models, mechanisms, and prevention

Dr. Brandon Weeks
Professor and Associate Department Chair
High explosives, nanofabrication, microcantilever, crystal growth

Dr. Wei Li
Assistant Professor
Cell/polymer interactions, cell microenvironments, biomedical devices

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

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

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

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

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