TEXAS TECH UNIVERSITY

Department *of* Chemical Engineering™

CHEMICAL ENGINEERS transform our expanding knowledge of chemistry and engineering into powerful new materials, improved existing materials and optimized industrial processes for the whole of society. Engineers develop pharmaceuticals that can improve lives, use green chemistry with the potential to remove hazardous substances from the environment and optimize oil refining and chemical processes. But these "agents of change" don't stop with science and engineering — they enjoy success in medicine, law, and business as well.

DEGREES

- **Bachelor of Science in Chemical Engineering**
- Dual Bachelor's Degrees:
  Chemical Engineering and Computer Science
- **Master of Science in Chemical Engineering**
- **Doctor of Philosophy in Chemical Engineering**

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CHEMICAL ENGINEERING The profession of chemical engineering combines the principles of physical and chemical sciences with the discipline of engineering to solve modern technological problems and be of effective service to society.

The chemical engineer is largely responsible for the continual development of new processes and new products that have a direct impact on improving the quality of life and the environment. To this end, the department provides a broad-based program with individual, academic, and professional counseling.

RESEARCH With a small student-to-faculty ratio, chemical engineering students can gain research experience in cutting edge, faculty developed technologies, including:

- Bioengineering
- Computational Modeling
- Environmental Engineering
- Polymers and Materials
- Process Control and Optimization
- Biofuels and Renewable Energy

UNDERGRADUATE PROGRAMS Chemical engineering students are prepared for a career in any of the process industries that involve chemical transformations. Employment opportunities cover a wide spectrum that includes, among others, petroleum, plastics production, basic chemicals, petrochemicals, pharmaceuticals, metals, textiles, semiconductors, and various biomedical and biological specialties.

Many chemical engineers also are directly involved in the design of systems to minimize pollution of our environment or are active with governmental regulatory agencies that set environmental standards.

GRADUATE PROGRAMS The master's and Ph.D. programs enable students to be involved in the research areas listed above.

Master of Science in Chemical Engineering
A written thesis and a minimum of 24 hours of graduate-level coursework, exclusive of thesis and seminar, are required for the master's degree. The master's program may also be completed without a thesis.

Doctor of Philosophy in Chemical Engineering
The Doctor of Philosophy degree programs offer a mix of experimental and theoretical/computational approaches to solve problems at the cutting edge of science and technology.