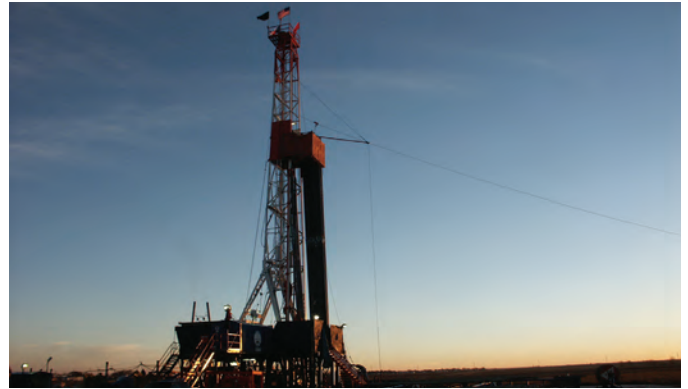




TEXAS TECH UNIVERSITY

# Bob L. Herd Department of Petroleum Engineering

**PETROLEUM ENGINEERING** is the practical application of the basic and physical sciences of mathematics, geology, physics, and chemistry and all of the engineering sciences to the discovery, development, and production, and transportation of petroleum. Petroleum is the most widely used form of mobile energy and now supplies approximately two-thirds of the total energy used in the United States. It is also a major raw material from which a wide variety of products are manufactured.



## DEGREES

- Bachelor of Science in Petroleum Engineering
- Graduate Certificate in Petroleum Engineering
- Master of Science in Petroleum Engineering
- Doctor of Philosophy in Petroleum Engineering

**RESEARCH** The department is uniquely located in the Permian Basin, where approximately 22 percent of the nation's petroleum resources and 68 percent of Texas' petroleum resources lie within a 175-mile radius. This proximity provides the student with unique opportunities for directly interfacing with industry as well as first hand observations of the oil field operations in the field and at Red Raider #1, Texas Tech's own test well. The department has been consistently ranked in the top ten petroleum engineering departments for both the graduate and undergraduate program.

With a small student to faculty ratio, students may gain cutting edge research experience in the areas of core analysis, advanced core analysis, pressure, volume, temperature (PVT) analysis, pressure transient analysis, well log analysis, natural gas engineering, property evaluation, artificial lift and system analysis, casing design and rheology studies, surface operations and facilities design, and petroleum engineering software.

## CONTACTS

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## UNDERGRADUATE PROGRAMS

Blending theory with practical knowledge, petroleum engineering students will become knowledgeable in reservoir, drilling and production engineering through courses in petroleum development, drilling, core analysis, reservoir rock properties and more. Advanced courses are offered in magnetic resonance imaging (MRI), reservoir simulation and enhanced recovery.

## GRADUATE PROGRAMS

With an international reputation for preparing students for successful entry into the petroleum industry, the graduate program gives students a competitive edge.

### Certificate in Petroleum Engineering

The department offers an 18-hour Graduate Certificate in Petroleum Engineering that is intended to supplement a course of study for the student who possesses an engineering degree other than petroleum engineering.

### Master of Science in Petroleum Engineering

The master's degree prepares the engineer to assume responsibility in technical and managerial areas within the oil and gas industry.

### Doctor of Philosophy in Petroleum Engineering

The objectives of the Ph.D. program are to provide students opportunities to reach a critical understanding of the basic scientific and engineering principles underlying their fields of interest and to cultivate their ability to apply these principles creatively through advanced methods of analysis, research, and synthesis.