Petroleum Engineers provide the world with energy while safeguarding the environment. Petroleum Engineering is concerned primarily with the safe and economic extraction of oil, gas, and other natural resources from the earth. Oil and gas is produced through the design, drilling and operation of wells and well systems, and the integrated management of the underground reservoirs in which the resources are found.

The mission of the Petroleum Engineering Department is to create, preserve, integrate, transfer and apply petroleum engineering knowledge and to enhance the human capability of its practitioners. The Petroleum Engineering Program has two educational objectives:

- graduates will have the technical depth and breadth to be successful professionals early in their careers; and
- graduates will have the broad technical knowledge and soft skills needed to rise to positions of professional leadership.

In essence, the goal of the Petroleum Engineering curriculum is to provide a modern engineering education with proper balance between fundamentals and practice, and to graduate engineers capable of being productive contributors immediately who are also prepared for life-long learning. The curriculum includes study of:

- design and analysis of well systems and procedures for drilling and completing wells;
- characterization and evaluation of subsurface geological formations and their resources;
- design and analysis of systems for producing, injecting and handling fluids;
- application of reservoir engineering principles and practices for optimizing resource development and management; and
- use of project economics and resource valuation methods for design and decision making under conditions of risk and uncertainty.

There is a heavy emphasis on mathematics, computer applications, communication skills and interdisciplinary problem solving. As a result, Aggie petroleum engineers are in high demand in the industry, and their starting salaries are consistently among the top in the University and the nation.

The department is well known for its curriculum, facilities and faculty, and its undergraduate program is recognized as one of the top petroleum engineering programs in the United States. The faculty comprises more than 34 professors and lecturers, many of them widely known and globally involved in the petroleum industry. Two (2) of the faculty are members of the prestigious National Academy of Engineering, and 17 are Distinguished Members of the Society of Petroleum Engineers. The Bachelor of Science program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Students must work as interns within the Energy Industry. A minimum of one internship, six weeks of approved experience, is required for graduation. The department also participates in the Cooperative Education Program.

In addition to the Bachelor of Science degree in Petroleum Engineering, the department also offers both masters and doctoral degrees, including Master of Science, Master of Engineering, and Doctor of Philosophy (see the Texas A&M University Graduate and Professional Catalog).

The department offers a combined program designed to help students complete both a Bachelor's degree and a Master's degree within 5 years. For more information, please contact the advising office.

Before commencing course work in the major, students must be admitted to the major or have the approval of the department.

Faculty

Abedi Mashhadimighani, Sara, Associate Professor
Petroleum Engineering
PHD, University of Southern California, 2012

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Petroleum Engineering
PHD, University of Southern California, 2002

Al-Mohannadi, Nasser, Professor of the Practice
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PHD, Texas A&M University, 1997

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Noynaert, Samuel F, Associate Professor of the Practice
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PHD, University of Manchester, 2018

Rahman, Mohammad A, Associate Professor
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Wu, Kan, Associate Professor
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PHD, The University of Texas at Austin, 2014

Zhu, Ding, Professor
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PHD, The University of Texas at Austin, 1992

Majors

- Bachelor of Science in Petroleum Engineering (http://catalog.tamu.edu/undergraduate/engineering/petroleum/bs/)

Minors

- Petroleum Engineering Minor (http://catalog.tamu.edu/undergraduate/engineering/petroleum/minor/)

Certificates

- Data Analytics for Petroleum Industry Certificate (http://catalog.tamu.edu/undergraduate/engineering/petroleum/data-analytics-petroleum-industry-certificate/)
- Energy Engineering Certificate (http://catalog.tamu.edu/undergraduate/engineering/petroleum/energy-engineering-certificate/)
- Petroleum Ventures Certificate (http://catalog.tamu.edu/undergraduate/engineering/petroleum/petroleum-ventures-certificate/)