

PETROLEUM ENGINEERING

The Department of Petroleum Engineering offers a sound background in basic sciences and their application to practical problems in the complex and changing area of petroleum technology. Such study provides the fundamentals of physics, chemistry, mathematics, geology, geophysics, computer science and engineering. Petroleum Engineering is housed in the School of Earth Sciences, and additional information about courses, requirements and faculty can be found in the Earth Sciences section of the Bulletin.

Petroleum engineers are concerned with the design of processes for hydrocarbon recovery from oil and gas reservoirs. Included in the design process are characterization of the spatial distribution of reservoir properties, drilling of wells, design and operation of production facilities, selection and implementation of reservoirs, and environmental aspects of petroleum exploration and production.

Petroleum engineers must understand the geology of reservoir rocks and the flow of fluids and heat through them. The broad training in this field prepares graduates for professional areas such as: enhanced oil and gas recovery; environmental engineering; geothermal energy production; natural gas engineering; reservoir engineering, reservoir simulation; water production and reclamation; well and property economic evaluation; well log analysis; well test analysis; and drilling and production technology.

We also provide two courses in basic petroleum engineering that are designed for majors in other disciplines who are interested in the subject or who are considering working in the oil industry. These classes are Pet. Engr. 120, Fundamentals of Petroleum Engineering, and Pet. Engr. 103, Energy Resources, which satisfies the distribution requirement in area 6 (Technology and Applied Sciences).

The normal Petroleum Engineering undergraduate program may satisfy the University General Education Requirements in Area 2: Natural Sciences, Applied Science and Technology and Mathematics. Courses that build depth in petroleum engineering are divided into two parts: (1) core courses taken by all undergraduates in Petroleum Engineering and (2) technical electives which focus on areas of specialization .

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