

# PETROLEUM PRODUCTION TECHNOLOGY (PROD)

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## **PROD 110. Fundamentals of the Petroleum Industry**

Credits: 4

Typically Offered: FALLSPR

The course provides an overview of petroleum industry operations and how they are interrelated. The course covers petroleum geology, exploration, drilling and production. The course starts with the nature of gas and oil, where we find it, leasing land and contracts, the mechanics and techniques of drilling, testing and completing of a well, surface equipment, separation, storage, measurement and sales.

## **PROD 220. Production Equipment**

Credits: 4

Typically Offered: FALL

The course is designed to give an overview of basic petroleum industry equipment and how it is utilized in the process. The course will cover wellheads, pumping units, flowlines, 2 and 3 stage separators, heater treaters, stock tanks, central tank batteries, salt-water disposal, vapor recovery units, flaring, pig launchers and receivers and metering. The characteristics, design, operation, and interactions of various pieces of equipment will be addressed.

## **PROD 230. Well Services**

Credits: 3

Typically Offered: FALL

This course will provide a basic overview of well completion, artificial lift, logging and testing, analyzing a well problem, service and workover equipment, fishing, sand cleanout, well stimulation and additional recovery methods. The course covers preparing the well for the workover, equipment used and different types of well servicing and workovers such as pulling rods, pumps, tubing, casing repair, well cleanout and swabbing. Different types of well stimulations used for improved production are discussed. Additional recovery techniques and benefits are covered.

## **PROD 240. Artificial Lift**

Credits: 2

Typically Offered: FALLSPR

The course will provide a basic overview of artificial lift that is used to improve production. The course reviews different types of artificial lift; rod pumps, progressing cavity pumps, gas lift, electrical submersible pumps, and hydraulic pumping systems.

## **PROD 250. Production Safety, Health & Environment**

Credits: 4

Typically Offered: SPRING

This course focuses on safe work practices and environmental issues in the petroleum production industry. Among additional topics, the course covers emergency action plans, driving safety, personal protective equipment, control of hazardous energy, slips trips and falls, excavation/confined space, and common safety practices used in the industry. Health hazards and hazard communication are discussed relating to the petroleum production industry. Environmental regulations and concerns specific to the petroleum production industry such as spill prevention control and countermeasures are addressed.