PROCESS TECHNOLOGY (PROP)

PROP 235. Hydrocarbon Chemistry
Credits: 3
This course provides a fundamental study of the organic chemistry of hydrocarbons associated with crude oil. This course will also focus on process chemistry, chemistry fundamentals, typical process reactions and process solubility theory.

PROP 236. Refinery, Ethanol and Distillation
Credits: 4
Prerequisites: Acceptance into Petroleum Production Technology, Power Generation Technology Program, Process Technology Program or Power Process Advanced Operator.
Typically Offered: FASPSU
This course covers the fundamental principles of distillation and its applications in various industries, including oil refining, biofuel, and ethanol production. Students will learn techniques for maintaining distillation processes within specification limits and learn the basics of crude oil processing in refineries. The course also introduces key processes and equipment used in corn processing, such as fermentation, distillation, and dehydration. Students will gain insight into the operational processes of both traditional and renewable energy production.

PROP 237. Distillation and Refinery Operations
Credits: 4
This course provides a comprehensive study of processes associated with refining, and petrochemical distillation. This course will also focus on equipment designs, operation requirements and technician responsibilities associated with the operation of typical distillation facilities.

PROP 239. Gas Processing and Carbon Capture
Credits: 3
This course is designed to introduce students to the fundamental steps of natural gas processing. It will cover fluid properties, absorption, demethanation, refrigerated absorbers, carbon capture and equipment used to perform these steps.

PROP 244. Ethanol and Biofuels Production
Credits: 3
Students study the design, operation, equipment and process flows of ethanol plants and biofuels facilities including biodiesel plants. The student will gain the ability to interpret basic flow diagrams and understand related terminology. Focus will be on equipment design and operation used in these facilities as well as safety considerations, typical maintenance, and startup/shutdown procedures.