

# COURSES

## PETROLEUM TECHNOLOGY

### PTRT 1291 CAPSTONE

1 lec / 3 lab (2 Cr.) Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.

Credits

2

Distribution

PTRT

### PTRT 1301 OVERVIEW OF PETROLEUM INDUSTRY

3 lec (3 Cr.) An overview of the entire petroleum industry. Purposes and proper procedures in a variety of different petroleum technologies: exploration, drilling, production, transportation, marketing, and refining.

Credits

3

Distribution

PTRT

### PTRT 1307 RECOVERY AND PRODUCTION METHODS

2 lec/2 lab (3 Cr.) An introduction to the two different methods associated with petroleum production: natural flow and artificial lift. The student will also develop skills and competency in lease-layout and specific recovery methods, such as water flooding, chemical flooding, thermal processes and CO2 injections.

Credits

3

Distribution

PTRT

### PTRT 1309 CORROSION BASICS

3 lec (3 Cr.) Principles of corrosion such as basic electrochemistry processes. Addresses the deterioration of materials, devices, or pieces of oil field (or other) machinery/equipment. Emphasis on terminology associated with metallic and nonmetallic corrosion.

Credits

3

Distribution

PTRT

### PTRT 1312 PETROLEUM REGULATIONS

3 lec (3 Cr.) Regulatory requirements and structures associated with the petroleum industry.

Credits

3

Distribution

PTRT

### PTRT 1313 INDUSTRIAL SAFETY

2 lec/2 lab (3 Cr.) An overview for petroleum and manufacturing workers of state/federal regulations and guidelines, which require industrial safety training. Topics include the 29 C.F.R. 1910, 1926 standards, such as confined space entry, emergency action, lock out/tag out, and other work-related subjects.

Credits

3

Distribution

PTRT

## PTRT 1317 NATURAL GAS PROCESSING

2 lec/2 lab (3 Cr.) An overview of natural gas processing operations. Fundamentals of gas processing, the nature of heat and how it implements the process, gas plant processing equipment, and procedures from raw material to the refined product.

Credits

3

Distribution

PTRT

## PTRT 1321 OIL FIELD HYDRAULICS

2 lec/2 lab (3 Cr.) Presents hydraulics applicable to drilling, completion and production. Includes calculating and evaluating the characteristics of the flowing and static fluids in various tubular and annular systems.

Credits

3

Distribution

PTRT

## PTRT 1324 PETROLEUM INSTRUMENTATION

2 lec/2 lab (3 Cr.) A course in accuracy, quality, and validation of gas and liquid measurement techniques for field and plant operating personnel. General principles of correct techniques of measurement and proper procedures to correct errors will be emphasized. Pre-requisite: PTRT 2359

Credits

3

Distribution

PTRT

## PTRT 1391 NATURAL GAS PROCESSING II

2 lec/2 lab (3 Cr.) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

Credits

3

Prerequisite

[PTRT 1301](#), [PTRT 1317](#)

Distribution

PTRT

## PTRT 2280 COOPERATIVE EDUCATION

1 lec/10 external (2 Cr.) Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component.

Credits

2

Distribution

PTRT

## PTRT 2323 NATURAL GAS PRODUCTION

2 lec/2 lab (3 Cr.) An overview of the aspects of natural gas production including gas well testing, field handling of gas, well casing head gas, separation, metering, and dehydration equipment, and gas compression/transportation systems.

Credits

3

Distribution

PTRT

## PTRT 2332 ARTIFICIAL LIFT

2 lec/2 lab (3 Cr.) Practical aspects of artificial lift in conventional production systems. Designed for students who have completed production methods PTRT 1307.

Credits

3

Prerequisite

[PTRT 1301](#) Overview of Petroleum

Distribution

PTRT

## **PTRT 2359 PETROLEUM COMPUTER APPLICATIONS**

2 lec/2 lab (3 Cr.) Computer applications used in the petroleum industry. Includes the automation of open and closed loop systems.

Credits

3

Distribution

PTRT

## **RBTC 1309 PNEUMATICS**

2 lec/2 lab (3 Cr.) A study of principles of pneumatics including formulas, functions, and circuits with hands-on experience in these industrial automated systems.

Credits

3

Distribution

PTRT