TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000005

PROD014 - Advanced Oil & Gas Field Processing

The Advanced Oil and Gas Field Processing Operations training course provides an in-depth coverage of oil and gas production and processing facilities.



Learn from the Best in the Business!

Course overview

Advanced level

Why take this course

The Advanced Oil and Gas Field Processing Operations training course provides an in-depth coverage of oil and gas production and processing facilities.

Topics covered include overview of upstream oil and gas production operations, fluid properties, phase behaviour, processing configurations, phase separation of gas, oil and water, emulsions, sand handling, dealing with wax and asphaltenes, oil treating, field desalting, crude stabilization & sweetening, crude oil storage & vapor recovery, measurement of crude oil, transportation of crude oil, solution gas processing, produced water treating, water injection systems, relief & flare systems. It also covers characteristics of natural gas, sales gas and product specifications, fluid flow – pipelines, vapour/liquid separation, gas compression, dehydration, gas well production facilities, gas sweetening, dew point control/liquids recovery, sulphur recovery/acid gas injection.

Who it is for and how it helps

Engineers involved in operating or designing Oil & Gas field processing facilities.

What you will learn

- Understand main thermodynamic transformations involved in Oil and Gas processing
- Grasp a comprehensive picture of Oil and Gas processing facilities
- Master operating variables and conditions of processing facilities

Curriculum

Modules 01–03

01 Thermodynamics applied to well effluent processing

- Well effluent
- Ideal and real fluid behavior
- Liquid-vapor equilibrium of pure substances
- Vapor pressure curves
- Enthalpy diagrams
- Liquid-vapor equilibrium of mixtures - Mixture separation processes
- Phase envelopes
- Flash, distillation, absorption, stripping
- Heat transfer, heat balance and thermal equipment

02 Oil and water treatment

- Need for field processing of oil - Quality requirements
- Crude oil treatment
- Crude stabilization
- Crude dehydration
- Acid crude sweetening
- Crude oil treatment process simulation
- Storage tanks: technology, operations and maintenance
- Production water treatment
- Regulation for disposal
- Main treatments
- Injection water treatment
- Quality requirements
- Main treatments

03 Gas processing and conditioning

- Need for field processing of gas - Quality requirements
- Gas processing
- Gas dehydration
- Gas sweetening

Curriculum

Module 03 — continued

- NGL extraction
- Simulation of a gas processing chain using
- Liquefied Natural Gas

Joining the programme

Contact the Academy and quote course code 000005 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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