MERCURY

Oil Production and Processing Facilities Training Course

7 – 11 February 2027
Kuala Lumpur (Malaysia)



Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
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Oil Production and Processing Facilities Training Course

Ref: 6077_301890 **Date:** 7 – 11 February 2027 **Location:** Kuala Lumpur (Malaysia) **Fees:** 4900 Euro

Introduction

This oil production and processing facilities course focuses on the critical elements of oil and gas production and subsequent treatment surface facility operations and processes. The comprehensive coverage includes the entire oil and gas value chain, from discovery, exploration, and transportation to refining and eventual sale to downstream industries.

In the oil production and processing facilities course, participants will learn about the vast array of oilfield production handling and treatment equipment and exposure to new technologies pertinent to oil and gas processing facilities.

The curriculum emphasizes oil and gas facilities, both onshore and offshore - from the wellhead to delivering on-specification crude oil to the refinery or natural gas to downstream users. This oil production and processing facilities course also involves an overview of produced water-treating facilities and discusses water injection systems.

The oil production and processing facilities course does not solely focus on the engineering aspects but also touches on practical operating problems, including the treatment of emulsions, sand handling, wax and asphaltenes management, natural gas dehydration, sweetening, and the intricacies of refinery processing that are crucial for oil and gas facility maintenance.

Oil and Gas Industry Process Efficiency

The oil and gas production process is a complex interplay of various operations that ensure the efficient extraction and treatment of these vital resources. By understanding the intricacies of oil production equipment and processes, professionals in the field can significantly improve these facilities' operational efficiency and maintenance protocols.

This oil production and processing facilities course will delve into the specifics of these processes, providing oil and gas production operator training to ensure the upholding of industry standards and the maximization of productivity.

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Targeted Groups

- Chemical, Mechanical Engineers, and Process Technologists.
- Facility and Inspection engineers.
- Maintenance or Project Engineers.
- Operations and Laboratory Chemists.
- Technicians, Support Engineers, and Engineering Trainees.
- Consultants and Sales Professionals.

Course Objectives

By the end of this oil and gas production training course, participants will be able to:

- Learn the origins and chemical characteristics of oil and gas.
- Understand the challenges associated with offshore operations, horizontal drilling, and other safety concerns.
- Familiarize the participants with various methods and techniques to explore, drill, produce, treat, and transport oil, gas, and their products.
- Introduce the participants to upstream, midstream, and downstream operations in the oil and gas industry process.
- Appreciate oil and natural gas treatment technologies and processes, including produced water treatment, which is integral for oil and gas facility maintenance.
- Learn the many processes involved in crude oil refining and how these contribute to refinery complexity and profitability.
- Gain valuable knowledge of gas sweetening and physical solvents unit troubleshooting.

Targeted Competencies

Upon the end of this oil and gas production training course, target competencies will be able to:

- Exploration activities related to oil and gas process training.
- Gather and separate techniques in the oil and gas production process.
- Gas injection and its impact on the gas and oil production process
- Hydrates and gas dehydration knowledge is pivotal for the course of oil production and processing facilities.
- Understand specifications and process selection for oil and gas facilities.
- Learn about downstream operations pertinent to oil and gas production training.
- Understand oil and gas pricing dynamics.

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Course Content

Unit 1: Introduction to Oil and Gas Production Life Cycle

- Learn about the nature and formation of fossil fuels and oil reserves.
- Introductory petroleum geology - Where we find fossil fuels: Onshore/offshore.
- Understand types of wells and reservoir types.
- Exploration activities include:

  - Exploration well.
  - Directional drilling.
  - Drill offshore.
  - Well-testing and completion.
  - Well-stimulation and workover.

Unit 2: Functions Related to Oil and Gas Operations

- Understand the chemistry of fossil fuels and petroleum.
- Physical properties of hydrocarbons.
- Oil and gas gathering and separation.
- Learn about on-site surface processing and its implications for oil and gas process training.
- Learn about produced water generation and management practices essential for oil and gas facility maintenance.
- Dew point control/liquids recovery.
- Acid gas injection.
- Oil recovery methods.

Unit 3: Chemical Reaction Processes

- What are the types of contaminants and general safety considerations?
- Learn about specifications and process selection criteria.
- Overview of hydrates and gas dehydration.
- Chemistry of amine gas sweetening.
- Alkanolamine processes selection and classification.
- Understand selection criteria for acid gas removal systems.
- Process flow schemes.
- General design criteria/guidelines.
- Learn about general operating problems in amine processes.

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Unit 4: Common Processes Used In Gas Plant Industries

- Understand physical processes: Selexol, fluor, rectisol, and purisol.
- Learn about alkaline salt processes: Hot potassium carbonate plants, Benfield, and Catacarb.
- Learn about the combination of Sulfinol and HiPure processes.
- Batch processes: Chemsweet, sulfa-check, sulfatreat, puraspec, molecular sieve.
- Iron chelate processes: LO-CAT and SulFerox.
- Liquid hydrocarbon treating: Regenerated caustic, Perco solid copper chloride, molecular sieve, and Merox.

Unit 5: Downstream Operations

- Oil and gas downstream operations.
- Oil storage and transportation.
- Crude oil treatment and processing.
- Refinery operations and products.
- Petrochemical industry.
- Oil and gas pricing.
- Learn about energy types, world energy review, and global statistics.