



*Training Course:
Advanced Oil & Gas Field Processing*

14 - 25 September 2025

Dubai (UAE)

Residence Inn by Marriott Sheikh Zayed Road, Dubai

Training Course: Advanced Oil & Gas Field Processing

Training Course code: EN236147 From: 14 - 25 September 2025 Venue: Dubai (UAE) - Residence Inn by Marriott Sheikh Zayed Road, Dubai Training Course Fees: 8400 € Euro

Introduction

Oil and gas field processing is a critical link in the value chain, bridging upstream exploration with downstream refining. As the energy industry evolves, field processing operations must meet increasingly stringent environmental, safety, and efficiency standards. This 12-day advanced training program, designed by Global Horizon Training Center, provides petroleum professionals with deep knowledge of field processing operations, including fluid separation, dehydration, gas treatment, compression, and water handling systems. Emphasis is placed on integrating new technologies, optimizing performance, and ensuring compliance with regulatory and safety requirements.

Objectives

By the end of this training program, participants will be able to:

- Understand the advanced principles of separation, dehydration, gas sweetening, and stabilization.
- Operate and troubleshoot key field processing equipment.
- Apply optimization techniques to increase processing efficiency.
- Analyze the characteristics of oil, gas, and water streams.
- Design and evaluate gas compression and flaring systems.
- Ensure safety, integrity, and environmental compliance across processing units.
- Integrate digital monitoring and predictive maintenance tools into field operations.

Organizational Impact

- Enhanced processing performance and reduced downtime
- Improved safety, reliability, and environmental compliance
- Cost savings through optimized energy and chemical use
- Increased competency in operating and maintaining processing facilities

- Better communication between field engineers, operators, and technical teams
- Strengthened response to abnormal operating conditions and emergency events

Target Audience

- Production Engineers and Process Engineers
- Field and Operations Supervisors
- Oil & Gas Facility Engineers
- Instrumentation and Control Engineers
- Maintenance and Reliability Engineers
- Safety, HSE, and Environmental Engineers
- Gas Plant and Field Processing Technicians

Training Program Outline:

Day 1: Overview of Field Processing Systems

- Introduction to oil & gas field processing
- Field vs central processing: layout and objectives
- Process flow diagrams PFDs and piping & instrumentation diagrams P&IDs
- Primary functions and components of surface facilities

Day 2: Multiphase Flow and Fluid Behavior

- Properties of produced fluids oil, gas, water, solids
- Emulsions, hydrates, and flow assurance issues
- Flow regimes and pressure-volume-temperature PVT behavior
- Sand and slug handling in pipelines

Day 3 : Separation Systems and Des

- 2-phase and 3-phase separators
- Separator internals and sizing criteria
- Pressure control, level control, and instrumentation
- Troubleshooting foaming, carryover, and surging

Day 4: Oil Dehydration and Desalting

- Electrostatic treaters and heaters
- Water/oil separation techniques
- Salt removal systems and BS&W monitoring
- Efficiency improvement and chemical dosing

Day 5: Gas Compression and Cooling Systems

- Types of compressors reciprocating, centrifugal, screw
- Compression stages and inter-stage cooling
- Anti-surge systems and vibration control
- Compressor performance curves and monitoring

Day 6: Gas Sweetening and Sulfur Recovery

- Removal of H₂S and CO₂ amine treatment
- Process equipment in amine plants
- Solid bed adsorption molecular sieves
- Sulfur recovery units SRU and tail gas treatment

Day 7: Gas Dehydration and Hydrocarbon Recovery

- Glycol dehydration TEG units
- Molecular sieve dehydration systems
- Hydrocarbon dewpoint control

- NGL recovery and LPG stabilization

Day 8: Crude Oil Stabilization and Storage

- Principles of crude stabilization
- Flash calculations and vapor pressure control
- Stabilizer column operations
- Tank storage design and vapor handling

Day 9: Produced Water Treatment and Disposal

- Produced water composition and challenges
- Skimmers, hydrocyclones, flotation units IGF/DAF
- Filtration and chemical treatment
- Reinjection, disposal, and zero discharge options

Day 10: Gas Flaring, Venting, and Emissions Control

- Flaring systems and flare stack designs
- Venting control and recovery systems
- Environmental regulations and flaring minimization
- Emission monitoring and reporting systems

Day 11: Safety, Integrity, and HSE in Field Processing

- Process safety and hazard analysis HAZOP
- Pressure relief, blowdown, and ESD systems
- Equipment integrity and corrosion monitoring
- Safety case development and emergency response planning

Day 12: Advanced Monitoring, Optimization, and Digitalization

- Real-time data acquisition SCADA, DCS
- KPIs and performance monitoring dashboards

- Predictive maintenance using AI/ML tools
- Smart field technologies and remote diagnostics

Registration form on the Training Course: Advanced Oil & Gas Field Processing

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng):
Position:
Telephone / Mobile:
Personal E-Mail:
Official E-Mail:

Company Information

Company Name:
Address:
City / Country:

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng):
Position:
Telephone / Mobile:
Personal E-Mail:
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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
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