

Oil & Gas Process Engineering and Facilities Design

Dubai (UAE)

22 - 26 November 2026

UK Training

PARTNER



Oil & Gas Process Engineering and Facilities Design

Code: OG32 From: 22 - 26 November 2026 City: Dubai (UAE) Fees: 4900 Pound

Introduction

The Oil & Gas Process Engineering and Facilities Design course delivers a comprehensive understanding of the principles, practices, and tools required to design and optimize oil and gas facilities.

It covers process engineering fundamentals, equipment selection, plant layout, and operational considerations to ensure efficiency, safety, and environmental compliance.

This course is aimed at engineers, project managers, supervisors, and technical professionals seeking to enhance their ability to design, evaluate, and manage oil and gas production facilities effectively.

Course Objectives

- Understand the core principles of oil and gas process engineering.
- Analyze process flow diagrams PFDs and piping and instrumentation diagrams P&IDs.
- Select appropriate equipment for oil, gas, and water processing.
- Apply safety and environmental standards in facility design.
- Optimize plant layout for operational efficiency.
- Perform basic calculations for process design.
- Assess facility performance and identify improvements.
- Review case studies of facility design projects.

Course Modules

Day 1: Fundamentals of Oil & Gas Process Engineering

- Overview of upstream, midstream, and downstream processes.
- Key principles of process engineering.
- Understanding fluid properties and behavior.
- Introduction to process simulation tools.
- Review of process flow diagrams PFDs.
- Exercise: interpreting a PFD for a basic facility.

Day 2: Process Equipment and System Design

- Separation equipment: two-phase and three-phase separators.
- Gas treatment systems.
- Oil dehydration and desalting units.
- Pumps, compressors, and heat exchangers.
- Storage tanks and pressure vessels.
- Exercise: equipment sizing basics.

Day 3: Piping, Instrumentation, and Control Systems



- Piping materials and design considerations.
- Understanding piping and instrumentation diagrams P&IDs.
- Control systems and instrumentation basics.
- Safety instrumented systems SIS.
- Valves, actuators, and control devices.
- Exercise: analyzing a P&ID for a process facility.

Day 4: Facility Layout and Safety Considerations

- Principles of plant layout design.
- Hazardous area classification.
- Fire and gas detection systems.
- Ergonomic and operational accessibility in layout.
- Environmental and regulatory compliance.
- Exercise: layout optimization for safety and efficiency.

Day 5: Optimization, Troubleshooting, and Case Studies

- Identifying operational bottlenecks.
- Techniques for process optimization.
- Troubleshooting process issues.
- Integrating new technologies into existing facilities.
- Review of real-world design challenges.
- Final exercise: design and present a facility layout.

Why Attend this Course: Wins & Losses!

- Gain comprehensive knowledge of process engineering and facility design.
- Learn to read and interpret PFDs and P&IDs.
- Understand equipment selection and design criteria.
- Apply safety and environmental standards effectively.
- Improve decision-making in facility design projects.
- Enhance plant performance and operational efficiency.
- Build practical skills through real case studies.
- Earn a professional certificate of completion.

Conclusion

The Oil & Gas Process Engineering and Facilities Design course provides participants with the technical skills and practical insights needed to excel in facility design and process optimization.

Through structured modules and practical exercises, attendees will gain the expertise to design safe, efficient, and compliant oil and gas facilities, improving operational performance and supporting long-term production goals.



Blackbird Training Clients



MANNAI Trading
Company WLL,
Qatar



Alumina Corporation
Guinea



Booking.com
Netherlands



Oxfam GB International
Organization,
Yemen



Capital Markets
Authority,
Kuwait



Waltersmith Petroman Oil Limited
Nigeria



Qatar National Bank
(QNB),
Qatar



Qatar Foundation,
Qatar



AFRICAN UNION ADVISORY
BOARD ON CORRUPTION,
Tanzania



KFAS
Kuwait



Reserve Bank of
Malawi,
Malawi



Central Bank of Nigeria
Nigeria



Ministry of Interior,
KSA



Mabruk Oil Company
Libya



Saudi Electricity
Company,
KSA



BADAN PENGELOLA
KEUANGAN Haji,
Indonesia



NATO
Italy



ENI CORPORATE
UNIVERSITY,
Italy



Gulf Bank
Kuwait



General Organization for
Social Insurance
KSA



Defence Space Administration
Nigeria



National Industries
Group (Holding),
Kuwait



Hamad Medical
Corporation,
Qatar



USAID
Pakistan



STC Solutions,
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS
UN.



Authority for
Electricity Regulation, Oman

UK Training
PARTNER



Blackbird Training Categories

Management & Admin

Entertainment & Leisure
Professional Skills
Finance, Accounting, Budgeting
Media & Public Relations
Project Management
Human Resources
Audit & Quality Assurance
Marketing, Sales, Customer Service
Secretary & Admin
Supply Chain & Logistics
Management & Leadership
Agile and Elevation

Technical Courses

Artificial Intelligence (AI)
Sustainability, ESG & Corporate Responsibility
Advanced Courses
Hospital Management
Public Sector
Special Workshops
Oil & Gas Engineering
Telecom Engineering
IT & IT Engineering
Health & Safety
Law and Contract Management
Customs & Safety
Aviation
C-Suite Training

