# Optimizing Oil & Gas Facility Design and Operations Course

14 – 18 December 2026
London (UK)

UK Trainig
PARTNER



# Optimizing Oil & Gas Facility Design and Operations Course

**Ref:** 321371_139175 **Date:** 14 – 18 December 2026 **Location:** London (UK) **Fees:** 6100 GBP

## Why This Course

As global energy demand evolves, oil and gas facilities must operate with greater efficiency, reliability, and cost-effectiveness than ever before. Modern facility design and operations require a deep understanding of infrastructure components, process optimization, equipment selection, and economic evaluation — all while navigating new technologies and rapidly shifting industry conditions.

The Oil & Gas Facility Design & Optimization Executive Program provides a comprehensive 1-week experience for engineers, technical professionals, and operations leaders who want to enhance their facility design strategies and improve operational performance. This program combines real-world industry practices, engineering fundamentals, and forward-looking technologies to help participants design smarter, more efficient, and economically sound facilities across upstream, midstream, and downstream operations.

## What You'll Learn and Practice

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

- Develop optimized design strategies for oil and gas facilities across all sectors
- Understand key infrastructure components and how they interact within integrated systems
- Select and evaluate equipment using proven engineering and operational criteria
- Apply economic evaluation frameworks to guide facility design and operational decisions
- Recognize emerging technologies and industry trends shaping future facility operations

## The Program Flow

### Day 1 - Oil & Gas Infrastructure Overview

- Overview of field processing facilities
- Water injection systems and integration
- Power generation and distribution fundamentals
- Refining facility components and operations
- Lifecycle cost analysis for facility planning



### Day 2 - Equipment & Process Optimization

- Flowlines, pipeline systems, and design considerations
- Crude separation and treatment technologies
- Gas handling, compression, and conditioning
- Oil pumping systems and transportation operations

### Day 3 - Water Management Systems

- Seawater treatment and injection processes
- Produced water handling and reinjection techniques
- Pump selection criteria and performance optimization
- Water quality control for facility reliability

### Day 4 - Midstream Operations

- Transportation infrastructure and pipeline logistics
- Pump and compressor station design and operation
- Storage facilities for oil, gas, and LNG components
- Monitoring, control systems, and digital operations

### Day 5 - Gas Operations & Economic Evaluation

- Gas processing and treatment technologies
- LNG facility design and operational considerations
- Technical and economic analysis for facility design options
- Optimization strategies, best practices, and industry case studies

## Individual Impact

Participants will gain:

- The ability to identify cost-effective improvements in facility design and operations
- Enhanced capability in optimizing production output and operational efficiency
- Stronger technical judgment when evaluating facility upgrades and investments
- Broader insight into industry best practices and modern technologies

## Organizational Impact

Organizations will benefit through:

- Improved facility performance and reduced operational costs
- Enhanced reliability, safety, and optimization of energy assets
- Better investment decisions supported by thorough economic evaluation
- Stronger competency in planning and managing facility life cycles



## Training Methodology

The program uses an applied, engineering-focused approach built on:

- Real-world case studies from upstream, midstream, and downstream operations
- Hands-on exercises in process optimization and equipment selection
- Technical discussions and problem-solving workshops
- Industry benchmarking and scenario-based learning
- Interactive sessions with seasoned oil and gas professionals

## Beyond the Course

Participants will return prepared to:

- Lead facility design and optimization initiatives
- Apply integrated engineering and economic evaluation methods
- Implement modern technologies to enhance facility performance
- Support strategic decisions that improve operational outcomes and cost efficiency

