GLOBAL HORIZON PLUS
TRAINING CENTER

Lean Six Sigma in Oil, Gas, and Energy Operations

London -

31-08-2026

Lean Six Sigma in Oil, Gas, and Energy Operations

Course code: PM439 From: 31-08-2026 Venue: London - Course Fees: 5000 £

Course Introduction

The oil, gas, and energy sectors operate in highly competitive, safety-critical, and asset-intensive environments where operational efficiency, reliability, quality, and cost management are essential for success. This course introduces participants to Lean Six Sigma principles and methodologies and explores their application in upstream, midstream, downstream, and energy operations. Participants will gain an understanding of how Lean Six Sigma supports operational excellence, process optimization, waste reduction, performance improvement, and continuous improvement across the energy value chain.

Course Objectives

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

- Understand the principles and concepts of Lean Six Sigma.
- Recognize the operational challenges facing oil, gas, and energy organizations.
- Identify sources of inefficiency, waste, and process variation in energy operations.
- Understand the DMAIC methodology and its role in performance improvement.
- Recognize opportunities for improving quality, reliability, and operational effectiveness.
- Understand the relationship between Lean Six Sigma, safety, and operational excellence.
- Explore industry best practices and successful improvement initiatives.
- Support continuous improvement efforts within their organizations.

Target Audience

- Oil and Gas Operations Personnel
- Production and Process Engineers
- Maintenance and Reliability Professionals
- Energy Sector Managers and Supervisors
- HSE Professionals
- Quality and Performance Improvement Specialists
- Asset Integrity Personnel

- Supply Chain and Logistics Professionals
- Project Managers
- Technical and Administrative Staff involved in operational performance improvement

Course Outline

Day 1

Introduction to Lean Six Sigma in the Energy Sector

- Overview of Lean and Six Sigma Methodologies
- Operational Excellence in Oil, Gas, and Energy Industries
- Industry Challenges and Performance Drivers
- Lean Six Sigma Principles and Benefits
- Understanding Value Creation Across the Energy Value Chain
- Continuous Improvement Culture

Day 2

Lean Principles and Operational Efficiency

- Understanding Waste in Oil and Gas Operations
- Sources of Operational Inefficiencies
- Lean Thinking in Energy Operations
- Process Flow and Operational Performance
- Asset Utilization and Productivity Improvement
- Lean Management Practices for Energy Organizations

Day 3

Six Sigma Concepts and Process Performance

- Understanding Process Variation and Quality Performance
- Introduction to the DMAIC Framework
- Process Reliability and Operational Consistency

- Performance Measurement and Key Metrics
- Data-Driven Decision Making
- Quality Improvement Strategies in Energy Operations

Day 4

Quality, Reliability, and Risk Management

- Quality Management in Oil, Gas, and Energy Facilities
- Reliability and Asset Performance Concepts
- Root Cause Analysis Principles
- Risk Management and Operational Excellence
- Process Standardization and Best Practices
- Lessons Learned from Industry Improvement Programs

Day 5

Leadership and Continuous Improvement

- Building a Continuous Improvement Culture
- Leadership's Role in Lean Six Sigma Initiatives
- Change Management in Energy Organizations
- Aligning Improvement Programs with Business Objectives
- Industry Case Studies and Success Stories
- Future Trends in Operational Excellence and Energy Management