



Future-Oriented Training and Consulting

OIL AND GAS FACILITY ENGINEERING PROGRAM

Oil & Gas Facility Engineering and Safety Compliance

Equipping engineers to design and operate facilities that meet industry safety standards.

Proven Facility Frameworks

Structured frameworks for facility engineering and safety compliance.

Executive Discussions

Case studies, simulations, and executive discussions from real facilities.

Safety Compliance Tool Exposure

Hands-on exposure to facility engineering and safety-compliance tools.

Practical Compliance Framework

A framework for designing and operating facilities that meet safety standards.

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Program Overview

This program builds technical expertise in engineering oil and gas facilities while ensuring rigorous safety compliance.

Through case studies, executive discussions, simulations, and hands-on exposure to facility engineering and safety-compliance tools, participants will develop a practical framework for designing and operating facilities that meet industry safety standards.

Program Objectives

- **Understand Oil and Gas Facility Fundamentals:** Grasp core processes and equipment in oil and gas facilities.
- **Apply Facility Engineering Principles:** Design process, piping, and equipment systems.
- **Apply Industry Safety Standards:** Design facilities that meet applicable safety codes.
- **Assess and Mitigate Process Risk:** Identify hazards and apply risk mitigation measures.
- **Operate Facilities Safely:** Apply safety practices to day-to-day operations.
- **Sustain Safety Compliance:** Apply monitoring and audit practices long-term.

Target Audience

This program is designed for professionals engineering and operating oil and gas facilities, including:

- **Process & Facility Engineers** designing oil and gas facility systems.
- **Mechanical & Piping Engineers** designing equipment and piping systems.
- **Operations & Plant Managers** overseeing safe facility operations.
- **HSE & Safety Officers** enforcing safety compliance standards.
- **Risk & Process Safety Engineers** assessing and mitigating process hazards.
- **Project & Construction Managers** delivering compliant facility projects.
- **Consultants & Compliance Advisors** guiding clients on safety compliance.

Program Impact

Participants will leave this program with practical facility engineering and compliance skills. Graduates will return to their organizations ready to design and operate facilities that meet industry safety standards.

Program Outline

MODULE 1: Foundations of Oil and Gas Facility Engineering

- Core processes and equipment in oil and gas facilities
- Overview of upstream, midstream, and downstream facilities
- Overview of applicable industry safety standards
- The engineer's role in facility safety compliance
- Common pitfalls in facility engineering projects

MODULE 2: Facility Engineering Principles

- Process and piping system design fundamentals
- Equipment sizing and selection criteria
- Instrumentation and control system integration
- Hands-on exposure to facility engineering tools
- Applying design standards to real facility scenarios

MODULE 3: Industry Safety Standards

- Key codes and standards governing facility safety
- Designing for fire, explosion, and toxic release risks
- Documenting compliance evidence for facility designs
- Hands-on exposure to safety-compliance tools

MODULE 4: Process Risk Assessment and Mitigation

- Identifying hazards through structured risk reviews
- Applying layers of protection and mitigation measures
- Auditing designs against risk assessment findings
- Using risk assessment and modeling tools
- Building a facility design that meets safety standards

MODULE 5: Safe Operations and Ongoing Compliance

- Applying safety practices to daily operations
- Monitoring facility performance and safety indicators
- Managing audits and regulatory inspections
- Sustaining safety compliance beyond the program