QUEST
Professional Center

PROFESSIONAL TRAINING COURSE

Course No. 1838

Industrial Safety & HSE Management in Oil & Gas Training Course

DOWNSTREAM OPERATIONS, REFINING, PETROCHEMICALS & INDUSTRIAL OPERATIONS
OIL & GAS

DURATION
5 Days

DELIVERY
Classroom

Course Overview

The Industrial Safety & HSE Management in Oil & Gas Training Course provides a comprehensive professional program designed to strengthen the capabilities required to manage health, safety, and environmental risks across oil and gas operations. The course addresses the complex hazards associated with exploration, drilling, production, processing, refining, storage, transportation, and maintenance activities, with emphasis on practical risk control and operational safety.

Participants will examine the principles of industrial safety and HSE management and learn how to identify hazards, assess operational risks, implement effective controls, and monitor safety performance. The program emphasizes proactive safety management and the development of systems that prevent incidents before they occur rather than relying solely on corrective actions after an event.

The course covers critical oil and gas safety areas including process safety, permit-to-work systems, energy isolation, confined spaces, hot work, hazardous materials, fire and explosion risks, lifting operations, working at height, electrical safety, contractor management, and emergency preparedness. Participants will learn how these controls can be integrated into daily operations and maintenance activities.

Particular attention is given to HSE leadership, safety culture, incident investigation, performance measurement, environmental protection, and continuous improvement. Practical exercises and oil and gas case scenarios enable participants to translate HSE principles into operational controls, management decisions, and sustainable safety improvement initiatives.

Objectives

- By the end of the course, participants will be able to:
- Analyze the major industrial, occupational, process, and environmental hazards associated with oil and gas operations.
- Apply systematic hazard identification and risk assessment techniques.
- Evaluate the effectiveness of engineering, administrative, and personal protective controls.
- Develop practical HSE controls for high-risk oil and gas activities.
- Apply effective permit-to-work and energy isolation principles.

- Assess fire, explosion, hazardous substance, and process safety risks.
- Strengthen contractor safety management and operational control.
- Develop emergency preparedness and response strategies for major incidents.
- Investigate incidents and identify underlying and root causes.
- Establish meaningful HSE performance indicators and monitoring systems.
- Strengthen safety leadership, workforce engagement, and proactive safety culture.
- Integrate environmental protection and operational risk management into HSE programs.

Who Should Attend

This course is designed for HSE managers, safety engineers, industrial safety professionals, process safety specialists, environmental professionals, operations engineers, maintenance engineers, field supervisors, and technical personnel working across oil and gas facilities.

It is also suitable for drilling, production, processing, refining, pipeline, terminal, and maintenance teams, as well as contractor management personnel and supervisors responsible for controlling high-risk activities and ensuring compliance with organizational HSE requirements.

The program is particularly valuable for managers, department heads, operational leaders, and decision-makers responsible for safety performance, risk management, emergency preparedness, process safety, environmental protection, and continuous improvement within oil and gas organizations.

Learning Outcomes

- Upon completion of the course, participants will be able to:
- Identify major hazards associated with oil and gas operations and facilities.
- Conduct structured hazard identification and operational risk assessments.
- Develop appropriate risk controls using the hierarchy of controls.
- Evaluate process safety and major accident hazards.
- Apply safe work practices for high-risk industrial activities.
- Manage permit-to-work and energy isolation requirements.

- Assess fire, explosion, chemical, electrical, mechanical, and physical hazards.
- Strengthen contractor HSE management and field supervision.
- Develop effective emergency response and crisis preparedness arrangements.
- Conduct structured incident investigations and root-cause analysis.
- Establish proactive and reactive HSE performance indicators.
- Evaluate environmental risks and implement appropriate mitigation measures.
- Strengthen HSE leadership and workforce safety engagement.
- Develop practical initiatives for improving safety culture and operational performance.

Course Outline

DAY 01

Fundamentals of Industrial Safety & HSE Management

- HSE management principles and their role in oil and gas operations.
- Major occupational, industrial, process, and environmental hazards.
- Hazard identification, risk assessment, and risk-ranking methodologies.
- Hierarchy of controls and implementation of effective risk-control measures.

> **PRACTICAL APPLICATION**
> Conduct a comprehensive hazard identification and risk assessment for a selected oil and gas operation.

DAY 02

Process Safety & High-Risk Work Management

- Process safety principles and major accident hazard prevention.
- Permit-to-work systems and control of hazardous work activities.
- Energy isolation, lockout and tagout, and control of hazardous energy.
- Confined space entry, hot work, working at height, lifting operations, and electrical safety.

> **PRACTICAL APPLICATION**
> Develop a safe work control plan for a high-risk maintenance activity.

DAY 03

Fire, Emergency Response & Incident Management

- Fire and explosion hazards in oil and gas facilities.
- Fire prevention, detection, protection, and emergency control measures.
- Emergency preparedness, response planning, evacuation, and crisis coordination.
- Incident reporting, investigation, root-cause analysis, and corrective actions.

> **PRACTICAL APPLICATION**
>
> Analyze an oil and gas incident scenario and develop an emergency response and corrective-action plan.

DAY 04

HSE Leadership, Contractor Management & Environmental Protection

- HSE leadership responsibilities and visible safety leadership.
- Safety culture, workforce engagement, communication, and behavioral safety.
- Contractor HSE management, prequalification, supervision, and performance monitoring.
- Environmental risks, emissions, waste, spills, hazardous materials, and pollution prevention.

> **PRACTICAL APPLICATION**
>
> Develop an HSE improvement plan for contractors operating within an oil and gas facility.

DAY 05

HSE Performance, Auditing & Continuous Improvement

- HSE performance measurement, leading and lagging indicators, and performance dashboards.
- HSE inspections, audits, observations, and compliance monitoring.
- Management of corrective and preventive actions and verification of effectiveness.
- Continuous improvement, lessons learned, and integration of HSE into operational decision-making.

DAY 05 — CONTINUED

- Final Application: Develop an integrated HSE management improvement plan for an oil and gas operation covering hazard identification, risk control, process safety, high-risk work, emergency preparedness, incident management, contractor safety, environmental protection, performance measurement, and continuous improvement.

Register or Request More Information

Course page: https://quest-training.com/courses/industrial-safety-hse-management-in-oil-gas-training-course
Website: https://quest-training.com
Email: info@quest-training.com
Phone: +905016771440