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## Course: Oil & Gas Operational Safety

Code	City	hotel	Start	End	price	Language - Hours
192	Al Baha	Hotel Meeting	2025-08-17	2025-08-21	12450 SR	En - 25

### INTRODUCTION

The importance of effective health and safety training in the oil and gas industry is highlighted by extensively reported examples of major process safety incidents including the 2010 Deepwater Horizon oil rig explosion in the Gulf of Mexico, the Buncefield oil storage depot explosion (2005), the 1988 Piper Alpha oil platform explosion (both occurring in the UK) and the BP Texas Refinery explosion in 2005. In this programme you will be able to:

- Enhance your skills in identifying root causes for incidents in the oil and gas industries
- Identify all business risks
- Familiar with oil and gas risk assessment techniques
- Implement advanced risk management techniques for incident prevention and control

### PROGRAMME OBJECTIVES

- Explain the purpose of and procedures for investigating incidents and how the lessons learnt can be used to improve health and safety in the oil and gas industries
- Explain the hazards inherent in oil and gas arising from the extraction, storage, and processing of raw materials and products



- Outline the risk management techniques used in the oil and gas industries
- Explain the purpose and content of an organisation's documented evidence to provide a convincing and valid argument that a system is adequately safe in the oil and gas industries

## **TRAINING METHODOLOGY**

Participants will learn by active participation during the programme through the use of exercises, case studies and open discussion forums. Videos shown will encourage further discussions and delegates are encouraged to bring forth experiences and problems from their own organisations. The programme will be run using power point slide, copies of which will be distributed both in hard and soft copies.

## **PROGRAMME SUMMARY**

This training programme is designed to provide a sound breadth of underpinning knowledge that enables delegates to manage oil and gas operational risks effectively.

## **PROGRAMME OUTLINE**

### **DAY 1 - Health, Safety and Environmental Management in Context**

- Learning from incidents
- Hazards inherent in oil and gas
- Risk management techniques used in the oil and gas industries
- Safe systems of work
- Hydrocarbon process safety I
- Process Safety Management (PSM)

### **DAY 2 - Hydrocarbon Process Safety**



- Mechanics of failure
- Safety critical equipment control
- Safe containment of hydrocarbons
- Plant operation and maintenance
- Start-up and shut down
- Fire hazards, risks and controls
- Furnaces and boiler operations

### **DAY 3 - Risk assessment techniques**

- Framework for risk assessment
- Hazard and Operability Study 'HAZOP'
- Failure Modes and Effects Analysis 'FMEA'
- The Bow-tie model
- Safety Integrity Level 'SIL' selection
- Hazardous Area Classification

### **DAY 4 - Fire Protection and Emergency Response**

- Fire and explosion in the oil and gas industries
- Types of fire
- Types of explosion
- Fire and explosion risk analysis
- Fire and explosion protective systems
- Emergency Plans and response

### **DAY 5 - Logistics and Transport Operations**

- Maritime transport
- Land transport
- Diving activities
- Cargo handling and lifting operations
- Programme review



The Scandinavian Academy for Training Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

### **Program Timings:**

- 9:00 AM to 2:00 PM

### **The program includes:**

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.