



*Training Course:
Gas Leak Detection: Risk Mitigation and
Response*

*27 - 31 October 2025
Madrid (Spain)
Pestana CR7 Gran Vía*

Training Course: Gas Leak Detection: Risk Mitigation and Response

Training Course code: SC236122 From: 27 - 31 October 2025 Venue: Madrid (Spain) - Pestana CR7 Gran Vía Training Course Fees: 6000 € Euro

Introduction

Gas leaks pose serious threats to life, property, and the environment across industrial, commercial, and even residential settings. Rapid detection and effective response are essential to minimizing the risks associated with combustible, toxic, or asphyxiant gases.

This comprehensive training program, designed by Global Horizon Training Center, focuses on the critical elements of gas leak detection technologies, risk assessment, emergency response planning, and regulatory compliance. The course emphasizes practical strategies to identify, prevent, and respond to gas leak incidents, equipping professionals with the knowledge and tools to maintain safe and compliant operations.

Objectives

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

- Understand the hazards and types of gases that may lead to leaks
- Identify key technologies used for gas detection and monitoring
- Evaluate gas detection systems for different operational environments
- Implement risk mitigation measures for gas handling and storage
- Develop and apply emergency response procedures for gas leaks
- Comply with local and international safety standards and regulations
- Interpret and act upon alarm signals, gas readings, and sensor feedback

Course Methodology

- Expert-led technical lectures
- Case studies of real-life gas leak incidents
- Hands-on demonstrations of gas detection equipment
- Group discussions and problem-solving exercises
- Simulations of gas leak response scenarios
- Interactive risk assessment workshops

Organizational Impact

Organizations participating in this course will benefit from:

- Reduced risk of gas-related incidents and downtime
- Improved workplace safety and operational reliability
- Increased staff competency in handling hazardous gases
- Enhanced preparedness for emergencies and incident response
- Strengthened compliance with health, safety, and environmental standards
- Better integration of detection systems into safety management practices

Target Audience

This program is designed for:

- HSE professionals and safety officers
- Maintenance and facility management personnel
- Process and operations engineers
- Gas and utility technicians
- Emergency response and fire protection teams
- Environmental and compliance specialists
- Industrial plant managers and supervisors

Course Outline

Day 1: Introduction to Gas Hazards and Detection Principles

- Types of hazardous gases toxic, flammable, oxygen-deficient
- Properties and behaviors of gases in various environments
- Overview of gas detection methods point vs. open-path
- Key components of gas detection systems
- Regulatory frameworks and safety standards OSHA, NFPA, IEC, ATEX

Day 2: Gas Detection Technologies and System Design

- Types of gas detectors electrochemical, IR, catalytic, PID
- Sensor placement strategies and environmental considerations
- Calibration procedures and maintenance requirements
- Portable vs. fixed gas detection systems
- Integration with control panels and SCADA systems

Day 3: Risk Assessment and Leak Prevention

- Gas leak risk identification and classification
- Hazard zone mapping and analysis Zone 0, 1, 2
- Leak prevention strategies in storage and pipeline systems
- Best practices for confined space entry and gas monitoring
- Preventive maintenance and inspection planning

Day 4: Emergency Response and Incident Management

- Gas leak detection response protocols
- Alarm response hierarchy and evacuation procedures
- Personal protective equipment PPE requirements
- Communication and coordination in emergency scenarios
- Case studies: analysis of gas leak accidents and lessons learned

Day 5: Testing, Documentation, and Compliance

- Functional testing and performance verification
- Recordkeeping and reporting obligations
- Auditing and inspection readiness
- Developing and updating gas leak response plans
- Final review, assessment, and participant feedback

Registration form on the Training Course: Gas Leak Detection: Risk Mitigation and Response

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
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