



*Training Course:
Gas Detection Systems: Fundamentals and
Applications*

*21 - 25 December 2025
Istanbul (Turkey)
DoubleTree by Hilton Istanbul Esentepe*

Training Course: Gas Detection Systems: Fundamentals and Applications

Training Course code: EN235465 From: 21 - 25 December 2025 Venue: Istanbul (Turkey) - DoubleTree by Hilton Istanbul Esentepe Training Course Fees: 6500 € Euro

Introduction

The "Gas Detection Systems: Fundamentals and Applications" training program, designed by Global Horizon Training Center, aims to provide participants with a comprehensive understanding of gas detection systems. This course covers the basic principles, types, and applications of gas detection systems, along with best practices for their installation, calibration, testing, and maintenance. Participants will gain essential skills to ensure the effective operation of gas detection systems, enhancing safety in various industrial environments.

Objectives

- Understand the fundamental principles of gas detection.
- Learn about different types of gas detection technologies and their applications.
- Develop skills for the proper installation and calibration of gas detection systems.
- Gain proficiency in testing and maintaining gas detection systems.
- Identify and troubleshoot common issues in gas detection systems.
- Ensure compliance with relevant safety standards and regulations.

Course Methodology

This course utilizes a blend of lectures, practical exercises, case studies, and interactive discussions. Participants will engage in hands-on sessions to apply theoretical knowledge, allowing them to develop practical skills and confidence in handling gas detection systems.

Organizational Impact

By participating in this course, organizations will:

- Enhance the safety and reliability of their gas detection systems.
- Reduce the risk of gas-related incidents and improve emergency response.
- Ensure adherence to industry standards and regulations.
- Improve the expertise of their personnel in gas detection technologies.
- Minimize downtime and maintenance costs through effective system management.

Target Audience

This course is ideal for:

- Safety engineers and managers
- Maintenance and technical personnel
- Electrical and instrumentation engineers
- Environmental health and safety professionals
- Anyone responsible for the installation, calibration, testing, and maintenance of gas detection systems

Outlines

Day 1: Introduction to Gas Detection

- Overview of gas detection principles
- Types of gases and their hazards
- Types of gas detectors electrochemical, catalytic, infrared, semiconductor
- Applications and industries
- Safety standards and regulations
- Components of gas detection systems

Day 2: Installation of Gas Detection Systems

- Site survey and risk assessment
- Selection criteria for gas detectors
- Installation guidelines and best practices
- Environmental and location considerations
- Hands-on installation exercises

Day 3: Calibration of Gas Detection Systems

- Importance of regular calibration
- Calibration techniques and procedures
- Zero and span calibration

- Calibration frequency and schedules
- Practical calibration sessions

Day 4: Testing and Maintenance of Gas Detection Systems

- Testing methods and procedures
- Functional and operational testing
- Maintenance schedules and procedures
- Common issues and troubleshooting
- Record keeping and documentation
- Maintenance exercises and case studies

Day 5: Advanced Topics and Case Studies

- Integration with safety and control systems
- Advanced troubleshooting techniques
- Case studies and real-world examples
- Group discussions and Q&A
- Final assessment and review

Registration form on the Training Course: Gas Detection Systems: Fundamentals and Applications

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- Please find enclosed a cheque made payable to Global Horizon
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