

LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

ISO 45001HYD — Occupational Health and Safety in Hydrogen Handling

ISO Certification Programme



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Reference ENG-HYD-45001HYD • ISO Energy

UKPRN 10067351 • Registered in England and Wales, company 4984798

AT A GLANCE

REFERENCE	ENG-HYD-45001HYD
AWARD	Certificate
ASSESSMENT	430 marks — 258 to pass (60%)
PREREQUISITES	None
VALIDITY	Lifetime
AWARDING BODY	LAPT — London Academy of Professional Training

CURRICULUM

1

Crisis Management and Emergency Response

5 chapters · 18 classes 45 marks

• 1 Understanding Crisis Management in Hydrogen Handling — 6 classes

› 1.1 Define Crisis Management Concepts in Hydrogen Handling

› 1.2 Identify Potential Crises Specific to Hydrogen Operations

› 1.3 Analyze Risk Factors and Vulnerabilities in Hydrogen Handling

› 1.4 Develop Effective Emergency Response Protocols for Hydrogen Incidents

› 1.5 Implement Leadership Strategies During Crisis Situations

› 1.6 Evaluate and Improve Crisis Management Plans for Hydrogen Safety

• 2 Identifying Potential Emergencies in Hydrogen Operations — 6 classes

› 2.1 Assess Risk Factors in Hydrogen Operations

› 2.2 Identify Common Emergency Scenarios in Hydrogen Handling

› 2.3 Evaluate the Impact of Hydrogen Leaks on Safety

› 2.4 Classify Types of Emergencies Specific to Hydrogen Operations

› 2.5 Develop Emergency Response Strategies for Hydrogen Risks

› 2.6 Create a Communication Plan for Hydrogen Emergency Situations

• 3 Crisis Communication Strategies in Hydrogen Incidents — 6 classes

› 3.1 Identify Key Stakeholders in Hydrogen Crisis Communication

› 3.2 Analyze Effective Communication Channels for Emergency Responses

› 3.3 Develop Clear Messaging Guidelines for Hydrogen Incidents

› 3.4 Simulate Crisis Scenarios to Test Communication Strategies

› 3.5 Evaluate Real-World Case Studies of Hydrogen Crisis Management

› 3.6 Create an Action Plan for Implementing Communication Strategies

• 4 Developing Emergency Response Plans for Hydrogen Handling

• 5 Training and Drills for Crisis Preparedness in Hydrogen Environments

• 1 Understanding Hydrogen Properties and Behavior — 6 classes

- › 1.1 Identify Hydrogen Characteristics and Properties
- › 1.2 Analyze the Behavior of Hydrogen Under Different Conditions
- › 1.3 Explore Hydrogen's Flammability and Explosive Limits
- › 1.4 Assess Environmental Factors Affecting Hydrogen Safety
- › 1.5 Examine Real-World Incidents Involving Hydrogen
- › 1.6 Apply Safety Management Strategies for Hydrogen Handling

• 2 Identifying Hydrogen Risks in Work Environments — 6 classes

- › 2.1 Identify Properties and Effects of Hydrogen in Work Environments
- › 2.2 Recognize Common Hydrogen Hazards in Various Industries
- › 2.3 Assess Risk Factors Associated with Hydrogen Handling
- › 2.4 Analyze Case Studies of Hydrogen Incidents and Lessons Learned
- › 2.5 Evaluate Control Measures to Mitigate Hydrogen Risks
- › 2.6 Develop a Hydrogen Safety Management Plan for Worksites

• 3 Implementing Effective Safety Management Systems for Hydrogen — 6 classes

- › 3.1 Identify Key Elements of Safety Management Systems for Hydrogen
- › 3.2 Assess Hazards and Risks Specific to Hydrogen Handling
- › 3.3 Develop Appropriate Safety Policies and Procedures for Hydrogen
- › 3.4 Implement Training Programs for Hydrogen Safety Awareness
- › 3.5 Monitor and Evaluate Safety Management Systems in Hydrogen Handling
- › 3.6 Communicate Safety Improvements and Foster a Safety Culture

• 4 Emergency Response Planning for Hydrogen Incidents — 6 classes

- › 4.1 Identify Hydrogen Incident Scenarios and Risks
- › 4.2 Develop Initial Emergency Response Strategies
- › 4.3 Establish Roles and Responsibilities in an Emergency
- › 4.4 Create Effective Communication Plans for Emergencies
- › 4.5 Practice Simulated Emergency Response Drills
- › 4.6 Review and Improve Emergency Response Plans

• 5 Leadership and Safety Culture in Hydrogen Operations — 6 classes

- › 5.1 Identify Key Elements of Safety Culture in Hydrogen Operations
- › 5.2 Assess Leadership Roles in Enhancing Safety Practices
- › 5.3 Evaluate Communication Strategies for Hazard Awareness
- › 5.4 Implement Safety Leadership Techniques in Team Settings
- › 5.5 Develop Action Plans for Improving Safety Culture
- › 5.6 Analyze Case Studies of Leadership Impact on Safety Outcomes

• 1 Understanding ISO 45001: Key Principles and Requirements — 6 classes

- › 1.1 Define ISO 45001: Understanding its Purpose and Scope
- › 1.2 Identify Key Principles of Occupational Health and Safety Management
- › 1.3 Explain the Core Requirements of ISO 45001
- › 1.4 Analyze the Structure of an ISO 45001 Management System
- › 1.5 Discuss the Role of Leadership in ISO 45001 Implementation
- › 1.6 Develop an Action Plan for Implementing ISO 45001 in Your Organization

• 2 Risk Assessment and Hazard Identification in Hydrogen Environments — 6 classes

- › 2.1 Define Key Hazards in Hydrogen Handling Environments
- › 2.2 Identify Risk Assessment Methodologies for Hydrogen Workplaces
- › 2.3 Conduct a Preliminary Hazard Identification Assessment
- › 2.4 Evaluate Risk Levels Associated with Hydrogen Usage
- › 2.5 Develop Mitigation Strategies for Identified Risks
- › 2.6 Implement and Monitor Hazard Control Measures in Practice

• 3 Developing an Occupational Health and Safety Management System (OHSMS) — 6 classes

- › 3.1 Identify Key Components of an OHSMS
- › 3.2 Assess Current Safety Practices and Gaps
- › 3.3 Develop Safety Policies and Objectives
- › 3.4 Implement Risk Assessment Techniques in Hydrogen Handling
- › 3.5 Promote a Safety Culture Through Employee Engagement
- › 3.6 Evaluate and Improve the OHSMS for Continuous Compliance

• 4 Leadership and Employee Engagement in Safety Culture — 6 classes

- › 4.1 Understand the Importance of Leadership in Safety Culture
- › 4.2 Identify Key Components of Employee Engagement in Safety
- › 4.3 Develop Strategies for Leadership Involvement in Safety Practices
- › 4.4 Implement Effective Communication Techniques for Safety Engagement
- › 4.5 Assess Employee Feedback Mechanisms for Safety Improvement
- › 4.6 Foster a Proactive Mindset Towards Safety Responsibilities

• 5 Monitoring, Review, and Continuous Improvement in OHSMS — 6 classes

- › 5.1 Analyze Current OHSMS Monitoring Practices
- › 5.2 Establish Key Performance Indicators for Safety
- › 5.3 Implement Regular Review Procedures for OHSMS
- › 5.4 Identify Areas for Improvement in Safety Protocols
- › 5.5 Develop a Continuous Improvement Action Plan
- › 5.6 Communicate OHSMS Changes Effectively to Stakeholders

• 1 Understanding Hydrogen Safety Leadership — 6 classes

- › 1.1 Define the Role of Leadership in Hydrogen Safety
- › 1.2 Identify Key Hazards Associated with Hydrogen Handling
- › 1.3 Analyze the Impact of Team Dynamics on Safety Culture
- › 1.4 Develop Effective Communication Strategies for Safety Leadership
- › 1.5 Evaluate Case Studies on Hydrogen Safety Failures and Successes
- › 1.6 Create an Action Plan for Improving Safety Leadership in Teams

• 2 Team Dynamics in High-Stakes Environments — 6 classes

- › 2.1 Analyze High-Stakes Team Dynamics
- › 2.2 Identify Leadership Styles Impacting Team Performance
- › 2.3 Assess Communication Strategies in Critical Situations
- › 2.4 Cultivate Trust and Collaboration Among Team Members
- › 2.5 Implement Decision-Making Frameworks in Pressure Scenarios
- › 2.6 Evaluate Team Resilience and Adaptability in Challenging Environments

• 3 Communication Strategies for Safety Leadership — 6 classes

- › 3.1 Identify Key Communication Barriers in Safety Leadership
- › 3.2 Develop Clear Safety Messaging for Team Engagement
- › 3.3 Implement Active Listening Techniques for Effective Communication
- › 3.4 Utilize Feedback Mechanisms to Enhance Safety Dialogue
- › 3.5 Foster a Culture of Open Communication in Hydrogen Handling
- › 3.6 Create an Action Plan for Continuous Improvement in Safety Communication

• 4 Risk Management and Decision-Making in Hydrogen Safety — 6 classes

- › 4.1 Identify Key Risks in Hydrogen Handling Environments
- › 4.2 Assess the Impact of Risks on Team Dynamics
- › 4.3 Analyze Historical Data to Improve Risk Awareness
- › 4.4 Develop Effective Decision-Making Strategies for Safety
- › 4.5 Implement Risk Mitigation Measures in Team Practices
- › 4.6 Evaluate Team Performance in Managing Hydrogen Safety Risks

• 5 Fostering a Culture of Continuous Improvement in Safety — 6 classes

- › 5.1 Identify Key Elements of a Safety Culture
- › 5.2 Analyze Current Safety Practices and Gaps
- › 5.3 Engage Team Members in Safety Improvement Initiatives
- › 5.4 Develop Strategies for Continuous Safety Training
- › 5.5 Implement Feedback Mechanisms for Safety Reporting
- › 5.6 Evaluate the Impact of Safety Improvements on Team Performance

• 1 Understanding Key Performance Indicators (KPIs) for Hydrogen Safety — 6 classes

- › 1.1 Define Key Performance Indicators for Hydrogen Safety
- › 1.2 Identify Essential KPIs in Hydrogen Handling Operations
- › 1.3 Analyze the Role of KPIs in Enhancing Safety Culture
- › 1.4 Establish Baseline Metrics for Hydrogen Safety Performance
- › 1.5 Implement Strategies for Monitoring and Reporting KPIs
- › 1.6 Evaluate Continuous Improvement Processes through KPI Data

• 2 Data Collection Techniques for Performance Metrics in Hydrogen Handling — 6 classes

- › 2.1 Identify Key Data Sources for Performance Metrics in Hydrogen Handling
- › 2.2 Implement Data Collection Methods for Effective Performance Metrics
- › 2.3 Analyze Collected Data to Evaluate Health and Safety Performance
- › 2.4 Utilize Statistical Tools for Data Interpretation in Hydrogen Safety
- › 2.5 Develop Metrics for Continuous Improvement in Hydrogen Handling Practices
- › 2.6 Create Action Plans Based on Performance Metric Analysis

• 3 Analyzing Performance Data to Identify Safety Trends — 6 classes

- › 3.1 Collecting Performance Data for Safety Analysis
- › 3.2 Interpreting Key Metrics in Hydrogen Safety
- › 3.3 Identifying Patterns in Safety Incident Reports
- › 3.4 Utilizing Statistical Tools to Analyze Trends
- › 3.5 Developing Action Plans Based on Data Insights
- › 3.6 Establishing a Continuous Improvement Framework for Safety

• 4 Implementing Continuous Improvement Strategies in Hydrogen Safety — 6 classes

- › 4.1 Assess Current Hydrogen Safety Practices
- › 4.2 Identify Key Performance Indicators for Continuous Improvement
- › 4.3 Analyze Data for Discovering Improvement Opportunities
- › 4.4 Develop Action Plans for Safety Enhancements
- › 4.5 Implement Continuous Improvement Processes in Hydrogen Handling
- › 4.6 Review and Adjust Strategies Based on Performance Outcomes

• 5 Reporting and Communicating Performance Outcomes for Stakeholder Engagement — 6 classes

- › 5.1 Identify key performance indicators for hydrogen safety communication
- › 5.2 Develop effective reporting templates for stakeholder engagement
- › 5.3 Analyze performance data to inform stakeholders on safety outcomes
- › 5.4 Create persuasive narratives to communicate performance results
- › 5.5 Implement feedback mechanisms for continuous improvement in reporting
- › 5.6 Evaluate the impact of performance communication on stakeholder trust

• 1 Introduction to Regulatory Frameworks in Hydrogen Safety — 6

classes

- › 1.1 Define Key Regulatory Frameworks in Hydrogen Safety
- › 1.2 Identify Relevant ISO Standards for Hydrogen Handling
- › 1.3 Explain the Role of Compliance in Occupational Health and Safety
- › 1.4 Analyze Case Studies of Regulatory Failures in Hydrogen Safety
- › 1.5 Evaluate the Impact of Regulatory Compliance on Workplace Safety
- › 1.6 Develop an Action Plan for Implementing Compliance Strategies

• 2 Key Principles of ISO 45001 for Hydrogen Handling — 6 classes

- › 2.1 Identify the Key Principles of ISO 45001 for Hydrogen Handling
- › 2.2 Analyze the Importance of Risk Assessment in Hydrogen Safety
- › 2.3 Explore the Roles and Responsibilities of Leadership in ISO 45001 Compliance
- › 2.4 Assess the Requirements for Implementing an Effective Safety Management System
- › 2.5 Evaluate the Process of Incident Reporting and Investigation in Hydrogen Handling
- › 2.6 Develop a Continuous Improvement Plan for Occupational Health and Safety in Hydrogen Operations

• 3 Compliance Strategies for Hydrogen Safety Regulations — 6

classes

- › 3.1 Identify Key Hydrogen Safety Regulations Framework
- › 3.2 Analyze UK and International Compliance Standards
- › 3.3 Evaluate Organizational Responsibilities in Hydrogen Safety
- › 3.4 Develop Effective Risk Assessment Strategies for Hydrogen
- › 3.5 Implement Training Programs for Compliance Awareness
- › 3.6 Review and Adapt Compliance Strategies for Continuous Improvement

• 4 Risk Assessment and Management in Hydrogen Operations — 6

classes

- › 4.1 Identify Hydrogen Hazards in the Workplace
- › 4.2 Define Risk Assessment Methodologies for Hydrogen Operations
- › 4.3 Analyze Potential Risks Associated with Hydrogen Handling
- › 4.4 Evaluate Control Measures for Risk Mitigation in Hydrogen Usage
- › 4.5 Implement a Continuous Risk Management Process in Hydrogen Operations
- › 4.6 Communicate Risk Assessment Findings to Stakeholders

• 5 Auditing and Continuous Improvement in Hydrogen Safety Compliance — 6 classes

- › 5.1 Identify Key Auditing Principles for Hydrogen Safety Compliance
- › 5.2 Analyze Regulatory Requirements Impacting Hydrogen Safety Audits
- › 5.3 Assess the Role of Internal vs. External Auditors in Compliance
- › 5.4 Develop Effective Audit Plans for Hydrogen Safety Management
- › 5.5 Implement Continuous Improvement Strategies for Audit Findings
- › 5.6 Evaluate Case Studies of Successful Hydrogen Safety Compliance Audits