

# LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

## ISO 9001CHM — Quality Management in Chemical Industry

*ISO Certification Programme*



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### LAPT — London Academy of Professional Training

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**Reference** MTL-CHM-9001CHM • ISO Materials

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|          |          |         |             |           |          |
|----------|----------|---------|-------------|-----------|----------|
| 6        | 30       | 180     | 430         | 60%       | Lifetime |
| SUBJECTS | CHAPTERS | CLASSES | TOTAL MARKS | PASS MARK | VALIDITY |

### AT A GLANCE

|               |                                                |
|---------------|------------------------------------------------|
| REFERENCE     | MTL-CHM-9001CHM                                |
| AWARD         | Certificate                                    |
| ASSESSMENT    | 430 marks — 258 to pass (60%)                  |
| PREREQUISITES | None                                           |
| VALIDITY      | Lifetime                                       |
| AWARDING BODY | LAPT — London Academy of Professional Training |

### CURRICULUM

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| <div>1</div> <div>Continuous Improvement Strategies</div> <div>5 chapters · 30 classes 45 marks</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <div>• 1 Identifying Continuous Improvement Opportunities in Chemical Processes — 6 classes</div> <div> <div>› 1.1 Assess Current Chemical Process Performance Metrics</div> <div>› 1.2 Identify Key Areas for Improvement in Production Efficiency</div> <div>› 1.3 Conduct Root Cause Analysis for Process Inefficiencies</div> <div>› 1.4 Explore Lean Manufacturing Principles for Chemical Processes</div> <div>› 1.5 Develop a Continuous Improvement Action Plan for Chemical Operations</div> <div>› 1.6 Implement and Monitor Continuous Improvement Initiatives in the Lab</div> </div> <div>• 2 Implementing Effective Continuous Improvement Methodologies — 6 classes</div> <div> <div>› 2.1 Identify Key Continuous Improvement Methodologies in Chemical Industry</div> <div>› 2.2 Analyze the Role of Leadership in Driving Continuous Improvement</div> <div>› 2.3 Evaluate Tools and Techniques for Continuous Improvement Implementation</div> <div>› 2.4 Develop a Continuous Improvement Action Plan for Your Organization</div> <div>› 2.5 Measure and Monitor Continuous Improvement Outcomes Effectively</div> <div>› 2.6 Foster a Culture of Continuous Improvement within Teams</div> </div> <div>• 3 Measuring and Analyzing Improvement Outcomes in Chemical Operations — 6 classes</div> <div> <div>› 3.1 Define Key Performance Indicators (KPIs) for Chemical Operations</div> <div>› 3.2 Collect Data for Measuring Improvement Outcomes</div> <div>› 3.3 Analyze Data Trends to Identify Areas for Improvement</div> <div>› 3.4 Implement Statistical Tools for Process Evaluation</div> <div>› 3.5 Develop Action Plans Based on Improvement Analysis</div> <div>› 3.6 Communicate Improvement Outcomes to Stakeholders</div> </div> | <div>• 4 Engaging Teams in Continuous Improvement Culture — 6 classes</div> <div> <div>› 4.1 Define Continuous Improvement and Its Importance in Team Dynamics</div> <div>› 4.2 Identify Key Characteristics of a Continuous Improvement Culture</div> <div>› 4.3 Explore Techniques for Encouraging Team Participation in Improvement Activities</div> <div>› 4.4 Develop Strategies for Empowering Teams to Suggest Improvements</div> <div>› 4.5 Implement Feedback Mechanisms to Foster Continuous Improvement</div> <div>› 4.6 Create an Action Plan for Sustaining a Continuous Improvement Culture Within Teams</div> </div> <div>• 5 Sustaining Continuous Improvement Efforts in the Chemical Industry — 6 classes</div> <div> <div>› 5.1 Evaluate Current Continuous Improvement Practices in Chemical Operations</div> <div>› 5.2 Identify Key Performance Indicators for Sustainability</div> <div>› 5.3 Develop Action Plans Based on Performance Metrics</div> <div>› 5.4 Foster a Culture of Continuous Improvement among Employees</div> <div>› 5.5 Implement Feedback Mechanisms for Continuous Improvement Initiatives</div> <div>› 5.6 Assess and Refine Continuous Improvement Strategies Over Time</div> </div> |

**• 1 Fundamentals of Data Collection in Quality Management** — 6 classes

- › 1.1 Define Key Terms in Data Collection for Quality Management
- › 1.2 Identify Different Types of Data in the Chemical Industry
- › 1.3 Explore Methods of Data Collection for Quality Improvement
- › 1.4 Discuss the Role of Sampling in Data Collection
- › 1.5 Analyze the Impact of Data Quality on Quality Management
- › 1.6 Apply Data Collection Techniques to Real-World Quality Scenarios

**• 2 Statistical Techniques for Quality Analysis** — 6 classes

- › 2.1 Understand Descriptive Statistics for Quality Metrics
- › 2.2 Apply Control Charts for Performance Monitoring
- › 2.3 Explore Process Capability Analysis Techniques
- › 2.4 Utilize Hypothesis Testing for Quality Decisions
- › 2.5 Implement Regression Analysis for Predictive Quality Improvement
- › 2.6 Synthesize Data Findings into Actionable Quality Strategies

**• 3 Identifying Trends and Patterns in Quality Data** — 6 classes

- › 3.1 Collecting Quality Data: Tools and Techniques
- › 3.2 Understanding Basic Statistical Concepts for Quality Analysis
- › 3.3 Visualizing Quality Data: Charts and Graphs
- › 3.4 Identifying Trends: Techniques for Data Interpretation
- › 3.5 Analyzing Patterns: Using Control Charts Effectively
- › 3.6 Applying Findings: Action Planning for Continuous Improvement

**• 4 Root Cause Analysis for Quality Improvement** — 6 classes

- › 4.1 Identify Key Concepts in Root Cause Analysis
- › 4.2 Utilize the 5 Whys Technique for Problem Identification
- › 4.3 Apply Fishbone Diagram for Cause Categorization
- › 4.4 Conduct a Root Cause Investigation with Real-World Examples
- › 4.5 Develop Action Plans Based on Root Cause Findings
- › 4.6 Evaluate and Monitor the Effectiveness of Solutions

**• 5 Implementing Data-Driven Decisions for Quality Enhancement** — 6 classes

- › 5.1 Recognize Key Quality Metrics in Data Analysis
- › 5.2 Collect and Organize Relevant Data for Quality Improvement
- › 5.3 Analyze Data Trends to Identify Quality Issues
- › 5.4 Interpret Data Results to Inform Decision-Making
- › 5.5 Develop Data-Driven Strategies for Quality Enhancement
- › 5.6 Implement and Review Quality Improvement Initiatives

**• 1 Understanding ISO 9001: The Framework for Quality Management in Chemicals** — 6 classes

- › 1.1 Define ISO 9001 and Its Importance in Quality Management
- › 1.2 Identify Key Principles of ISO 9001 for Chemical Industries
- › 1.3 Explore the Structure of ISO 9001 Standards
- › 1.4 Examine the Role of Leadership in Implementing ISO 9001
- › 1.5 Analyze Case Studies: ISO 9001 Success in Chemical Companies
- › 1.6 Develop an Action Plan for ISO 9001 Implementation in Your Organisation

**• 2 Leadership's Role in Quality Management Systems** — 6 classes

- › 2.1 Define Leadership's Role in Quality Management
- › 2.2 Identify Key Leadership Principles in ISO 9001
- › 2.3 Explore the Impact of Leadership on Organizational Culture
- › 2.4 Analyze Case Studies of Effective Leadership in Quality Management
- › 2.5 Implement Leadership Strategies for Quality Improvement
- › 2.6 Evaluate Leadership Performance in Quality Management Systems

**• 3 Risk-Based Thinking: Integrating Risk Management into ISO 9001** — 6 classes

- › 3.1 Define Risk-Based Thinking in Quality Management
- › 3.2 Identify Common Risks in the Chemical Industry
- › 3.3 Analyze the Impact of Risks on ISO 9001 Standards
- › 3.4 Develop Strategies for Risk Assessment and Mitigation
- › 3.5 Integrate Risk Management into Quality Management Processes
- › 3.6 Evaluate the Effectiveness of Risk-Based Approaches in ISO 9001

**• 4 Creating and Implementing Quality Policies and Objectives** — 6 classes

- › 4.1 Analyze Current Quality Practices in the Chemical Industry
- › 4.2 Define Quality Policy Components and Requirements
- › 4.3 Develop Measurable Quality Objectives Aligned with ISO 9001
- › 4.4 Engage Stakeholders in Quality Policy Formulation
- › 4.5 Create a Quality Policy Document for Your Organization
- › 4.6 Implement and Communicate Quality Policies Throughout the Organization

**• 5 Effective Internal Audits and Continuous Improvement in the Chemical Sector** — 6 classes

- › 5.1 Understand the Purpose and Scope of Internal Audits in the Chemical Sector
- › 5.2 Identify Key ISO 9001 Standards Relevant to Chemical Industry Audits
- › 5.3 Develop Effective Audit Checklists for Continuous Improvement
- › 5.4 Conduct a Mock Internal Audit Using ISO 9001 Criteria
- › 5.5 Analyze Audit Findings to Drive Continuous Improvement Initiatives
- › 5.6 Create an Action Plan for Implementing Audit Recommendations

**• 1 Understanding Quality Management Principles in the Chemical Industry** — 6 classes

- › 1.1 Explore the Core Principles of Quality Management
- › 1.2 Identify Key Quality Management Standards in Chemical Industry
- › 1.3 Analyze the Role of Leadership in Driving Quality Initiatives
- › 1.4 Evaluate the Impact of Quality Management on Operational Efficiency
- › 1.5 Develop Strategies for Implementing Quality Management Systems
- › 1.6 Assess Case Studies of Quality Management Success in Chemical Sector

**• 2 The Role of Leadership in Quality Assurance** — 6 classes

- › 2.1 Define Leadership Roles in Quality Assurance
- › 2.2 Analyze Leadership Styles Impacting Quality Management
- › 2.3 Identify Key Skills for Effective Quality Leadership
- › 2.4 Develop Strategies for Promoting a Quality Culture
- › 2.5 Evaluate the Influence of Leadership on Team Performance
- › 2.6 Implement Leadership Practices for Continuous Improvement

**• 3 Building and Sustaining a Quality Management Framework** — 6 classes

- › 3.1 Identify Key Components of a Quality Management Framework
- › 3.2 Understand Leadership Roles in Quality Management
- › 3.3 Develop a Vision for Quality Management in the Chemical Industry
- › 3.4 Implement Strategies for Quality Improvement Initiatives
- › 3.5 Evaluate Performance Metrics for Sustaining Quality Management
- › 3.6 Foster a Culture of Continuous Improvement within Teams

**• 4 Driving Continuous Improvement through Leadership Practices** — 6 classes

- › 4.1 Identify Key Leadership Traits for Quality Management Success
- › 4.2 Explore Leadership Styles That Foster Continuous Improvement
- › 4.3 Analyze the Role of Communication in Quality Leadership
- › 4.4 Develop Strategies for Empowering Teams in Quality Initiatives
- › 4.5 Implement Feedback Loops to Enhance Leadership Effectiveness
- › 4.6 Create an Action Plan for Sustaining Continuous Improvement

**• 5 Measuring Success: Metrics and Accountability in Quality Leadership** — 6 classes

- › 5.1 Define Key Success Metrics for Quality Management
- › 5.2 Analyze Qualitative vs. Quantitative Metrics in Leadership
- › 5.3 Establish Accountability Structures for Quality Outcomes
- › 5.4 Implement Continuous Improvement Metrics in Team Performance
- › 5.5 Utilize Data to Drive Decision-Making in Quality Management
- › 5.6 Create a Metric Dashboard for Real-Time Quality Tracking

**• 1 Fundamentals of Project Management in Quality Initiatives** — 6 classes

- › 1.1 Define Project Management Principles for Quality Initiatives
- › 1.2 Identify Key Stakeholders in Quality Management Projects
- › 1.3 Develop a Project Charter for Quality Initiatives
- › 1.4 Create a Quality Management Plan Outline
- › 1.5 Implement Risk Management Strategies in Quality Projects
- › 1.6 Evaluate Project Success Metrics for Quality Improvements

**• 2 Defining Project Scope and Objectives for Quality Improvements** — 6 classes

- › 2.1 Identify Stakeholders for Quality Improvement Projects
- › 2.2 Define Quality Improvement Objectives Clearly
- › 2.3 Determine Project Scope Using Smart Criteria
- › 2.4 Analyze Project Boundaries and Limitations
- › 2.5 Develop Detailed Project Deliverables and Milestones
- › 2.6 Create a Project Scope Statement for Quality Initiatives

**• 3 Planning Quality Initiatives: Tools and Techniques** — 6 classes

- › 3.1 Identify Key Quality Objectives for Projects
- › 3.2 Analyze Stakeholder Needs and Expectations
- › 3.3 Select Appropriate Quality Management Tools
- › 3.4 Develop a Quality Plan Template
- › 3.5 Implement Monitoring Techniques for Quality Initiatives
- › 3.6 Evaluate and Adjust Your Quality Initiatives

**• 4 Implementing and Monitoring Quality Projects** — 6 classes

- › 4.1 Define Quality Objectives for Project Success
- › 4.2 Develop a Quality Management Plan for Initiatives
- › 4.3 Identify Key Performance Indicators for Monitoring
- › 4.4 Implement Risk Assessment Strategies in Projects
- › 4.5 Conduct Regular Quality Audits and Reviews
- › 4.6 Utilize Feedback Mechanisms to Enhance Quality Outcomes

**• 5 Evaluating Success and Continuous Improvement in Quality Projects** — 6 classes

- › 5.1 Identify Key Performance Indicators for Quality Projects
- › 5.2 Assess Project Outcomes Against Quality Standards
- › 5.3 Conduct Root Cause Analysis for Project Failures
- › 5.4 Implement Feedback Mechanisms for Continuous Improvement
- › 5.5 Develop Action Plans Based on Evaluation Findings
- › 5.6 Facilitate Team Reflection Sessions for Quality Enhancement

**• 1 Foundations of Quality Management in the Chemical Industry** — 6 classes

- › 1.1 Define Quality Management Principles in the Chemical Industry
- › 1.2 Explore the Historical Development of Quality Management
- › 1.3 Identify Key ISO 9001 Standards Relevant to the Chemical Sector
- › 1.4 Analyze the Role of Leadership in Quality Management
- › 1.5 Discuss the Importance of Continuous Improvement in Quality Systems
- › 1.6 Implement a Quality Management Initiative in a Chemical Context

**• 2 Understanding ISO 9001 Standard Requirements** — 6 classes

- › 2.1 Explore the Structure of ISO 9001 Standard
- › 2.2 Identify Key Quality Management Principles
- › 2.3 Analyze the Importance of Customer Focus in Quality Management
- › 2.4 Evaluate Leadership Roles in Implementing ISO 9001
- › 2.5 Discuss the Role of Continuous Improvement in Quality Management
- › 2.6 Apply ISO 9001 Requirements to Enhance Chemical Industry Processes

**• 3 Implementing Quality Management Systems (QMS)** — 6 classes

- › 3.1 Identify Key Elements of a Quality Management System
- › 3.2 Assess Current Practices Against ISO 9001 Standards
- › 3.3 Develop a QMS Framework Tailored for the Chemical Industry
- › 3.4 Engage Stakeholders in QMS Implementation
- › 3.5 Monitor and Evaluate QMS Performance Metrics
- › 3.6 Create an Action Plan for Continuous Improvement of the QMS

**• 4 Continuous Improvement and Performance Measurement** — 6 classes

- › 4.1 Identify Key Principles of Continuous Improvement
- › 4.2 Assess Current Performance Measurement Techniques
- › 4.3 Explore Tools for Effective Continuous Improvement
- › 4.4 Develop Metrics for Performance Measurement
- › 4.5 Implement Continuous Improvement Strategies in Teams
- › 4.6 Evaluate the Impact of Improvements and Adjust Accordingly

**• 5 Leadership and Cultural Change in Quality Management** — 6 classes

- › 5.1 Define Leadership Roles in Quality Management
- › 5.2 Identify Key Cultural Change Drivers in Organizations
- › 5.3 Analyze the Impact of Leadership Styles on Quality Culture
- › 5.4 Develop a Vision for Quality Improvement Initiatives
- › 5.5 Create Strategies to Foster a Culture of Continuous Improvement
- › 5.6 Implement Leadership Practices to Support Quality Management Objectives