

LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

ISO 12100 — Safety of Machinery General Principles

ISO Certification Programme



LAPT — London Academy of Professional Training

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Reference SSR-OCS-12100 • ISO Security Safety & Risk

UKPRN 10067351 • Registered in England and Wales, company 4984798

AT A GLANCE

REFERENCE	SSR-OCS-12100
AWARD	Certificate
ASSESSMENT	430 marks — 258 to pass (60%)
PREREQUISITES	None
VALIDITY	Lifetime
AWARDING BODY	LAPT — London Academy of Professional Training

CURRICULUM

1 ISO 12100 Standards and Application 5 chapters · 30 classes 65 marks • 1 Introduction to ISO 12100: Framework and Principles — 6 classes › 1.1 Define ISO 12100 and its Importance in Machinery Safety › 1.2 Identify Key Principles of ISO 12100 Framework › 1.3 Explore the Scope and Applicability of ISO 12100 Standards › 1.4 Discuss the Roles and Responsibilities in Implementing ISO 12100 › 1.5 Analyze Real-World Applications of ISO 12100 in Machinery Design › 1.6 Evaluate the Impact of ISO 12100 on Risk Assessment Processes • 2 Risk Assessment Methodology in Machinery Safety — 6 classes › 2.1 Define Risk Assessment Concepts in Machinery Safety › 2.2 Identify Key Components of ISO 12100 Standards › 2.3 Outline the Risk Assessment Process for Machinery › 2.4 Apply the Risk Assessment Methodology to Practical Scenarios › 2.5 Evaluate Risk Control Measures and Their Effectiveness › 2.6 Develop a Risk Assessment Report for Machinery Safety • 3 Safety Measures and Design Principles for Machinery — 6 classes › 3.1 Identify Key Safety Measures in Machinery Design › 3.2 Analyze Risk Assessment Techniques for Machinery Safety › 3.3 Understand the Principles of Safe Machine Operation › 3.4 Evaluate Safety Guards and Their Effectiveness › 3.5 Implement Ergonomic Design Principles to Enhance Safety › 3.6 Develop a Comprehensive Safety Plan for Machinery Operation	• 4 Practical Application of ISO 12100 Standards in Industry — 6 classes › 4.1 Identify Key Components of ISO 12100 Standards › 4.2 Explore Risk Assessment Processes in Machinery Safety › 4.3 Analyze Case Studies of ISO 12100 Implementation › 4.4 Develop Safety Procedures Based on ISO 12100 Guidelines › 4.5 Evaluate Compliance and Safety Measures in Industrial Settings › 4.6 Design a Safety Management Plan Incorporating ISO 12100 • 5 Leadership in Implementing ISO 12100 Guidelines — 6 classes › 5.1 Understand the Importance of Leadership in ISO 12100 Compliance › 5.2 Identify Key Leadership Responsibilities for Implementing ISO 12100 › 5.3 Develop a Leadership Strategy for ISO 12100 Integration › 5.4 Communicate ISO 12100 Standards Effectively Across Teams › 5.5 Foster a Culture of Safety and Compliance Through Leadership › 5.6 Evaluate Leadership Effectiveness in ISO 12100 Implementation
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• 1 Introduction to Machinery Hazards and Risk Assessment — 6 classes

- › 1.1 Identify Common Machinery Hazards
- › 1.2 Understand the Basics of Risk Assessment
- › 1.3 Evaluate Risk Factors in Machinery Operations
- › 1.4 Apply Risk Assessment Techniques
- › 1.5 Develop Control Measures for Identified Risks
- › 1.6 Create a Machinery Safety Action Plan

• 2 Types of Machinery Hazards — 6 classes

- › 2.1 Identify Different Types of Machinery Hazards
- › 2.2 Understand the Causes of Mechanical Hazards
- › 2.3 Analyze Electrical Hazards in Machinery Operation
- › 2.4 Explore Thermal Hazards and Their Implications
- › 2.5 Assess the Risks Associated with Pneumatic and Hydraulic Systems
- › 2.6 Implement Control Measures for Identified Machinery Hazards

• 3 Conducting Risk Assessments for Machinery — 6 classes

- › 3.1 Identify Machinery Hazards in the Workplace
- › 3.2 Evaluate Risk Factors Associated with Machinery
- › 3.3 Apply Risk Assessment Methodologies for Machinery
- › 3.4 Prioritize Risks Based on Severity and Likelihood
- › 3.5 Develop Control Measures to Mitigate Risks
- › 3.6 Document and Review Risk Assessment Findings

• 4 Control Measures and Mitigation Strategies — 6 classes

- › 4.1 Identify Common Machinery Hazards
- › 4.2 Analyze Risk Levels Associated with Machinery
- › 4.3 Explore Control Measures for Hazard Mitigation
- › 4.4 Implement Safety Measures and Procedures
- › 4.5 Evaluate the Effectiveness of Control Strategies
- › 4.6 Develop a Continuous Improvement Plan for Safety

• 5 Compliance and Best Practices in Machinery Safety — 6 classes

- › 5.1 Identify Key Machinery Hazards in the Workplace
- › 5.2 Analyze Risk Factors Associated with Machinery Use
- › 5.3 Understand Compliance Requirements for Machinery Safety
- › 5.4 Implement Best Practices for Safety in Machinery Operations
- › 5.5 Evaluate Safety Measures and Their Effectiveness
- › 5.6 Develop a Machinery Safety Improvement Plan

• 1 Understanding ISO 12100 Principles for Machinery Safety — 6 classes

- › 1.1 Define Key Terms Related to ISO 12100
- › 1.2 Identify the Main Principles of Machinery Safety
- › 1.3 Analyze Risk Assessment Methodologies per ISO 12100
- › 1.4 Examine Duty of Care in Machinery Operation
- › 1.5 Apply ISO 12100 Principles to Real-World Scenarios
- › 1.6 Evaluate Safety Measures for Machinery based on ISO Standards

• 2 Risk Assessment Techniques in Occupational Safety — 6 classes

- › 2.1 Identify Hazardous Machinery and Processes
- › 2.2 Analyze Potential Risks in the Workplace
- › 2.3 Evaluate Existing Safety Measures and Controls
- › 2.4 Prioritize Risks Using the Risk Matrix Method
- › 2.5 Develop and Document a Risk Assessment Plan
- › 2.6 Implement and Review Risk Assessment Outcomes

• 3 Designing Safe Machinery: Implementing Safety Measures — 6 classes

- › 3.1 Identify Key Safety Risks in Machinery Design
- › 3.2 Analyze ISO 12100 Requirements for Safety Measures
- › 3.3 Incorporate Ergonomic Principles in Machine Design
- › 3.4 Implement Safety Devices and Control Systems
- › 3.5 Develop a Safety Verification Plan for Machinery
- › 3.6 Conduct Practical Evaluation of Safety Measures Implemented

• 4 Developing a Safety Culture within Organizations — 6 classes

- › 4.1 Define Key Concepts of Safety Culture
- › 4.2 Identify Barriers to a Positive Safety Culture
- › 4.3 Engage Employees in Safety Initiatives
- › 4.4 Develop Effective Communication Strategies for Safety
- › 4.5 Evaluate Current Safety Practices and Policies
- › 4.6 Create an Action Plan for Implementing Safety Improvements

• 5 Evaluating and Auditing Machinery Safety Practices — 6 classes

- › 5.1 Identify Key Machinery Safety Standards and Regulations
- › 5.2 Analyze Current Machinery Safety Practices in Your Workplace
- › 5.3 Conduct a Gap Analysis for Machinery Safety Compliance
- › 5.4 Develop an Effective Machinery Safety Audit Checklist
- › 5.5 Implement Safety Audit Procedures for Machinery Assessment
- › 5.6 Review and Enhance Machinery Safety Practices Based on Audit Findings

• 1 Fundamentals of Occupational Safety in Project Management — 6 classes

- › 1.1 Define Key Terminology in Occupational Safety
- › 1.2 Identify Legal Frameworks Impacting Project Safety
- › 1.3 Assess Risk Factors in Project Management
- › 1.4 Develop Effective Safety Strategies for Projects
- › 1.5 Implement Safety Protocols in Project Execution
- › 1.6 Evaluate Project Outcomes Through Safety Metrics

• 2 Risk Assessment and Management Techniques in Projects — 6 classes

- › 2.1 Identify Key Risk Factors in Project Safety
- › 2.2 Analyze Risk Assessment Methodologies for Machinery
- › 2.3 Evaluate Potential Hazards in Project Environments
- › 2.4 Implement Risk Management Strategies for Safe Operations
- › 2.5 Develop a Risk Mitigation Plan Tailored to Project Needs
- › 2.6 Review and Monitor Risk Management Practices for Continuous Improvement

• 3 Regulatory Compliance and Standards for Machinery Safety — 6 classes

- › 3.1 Identify Key Regulatory Standards for Machinery Safety
- › 3.2 Analyze the ISO 12100 Framework for Risk Assessment
- › 3.3 Assess Compliance Requirements for Machinery in the Workplace
- › 3.4 Evaluate the Role of CE Marking in Safety Compliance
- › 3.5 Develop a Machinery Safety Management Plan
- › 3.6 Implement Best Practices for Maintaining Regulatory Compliance

• 4 Implementing Safety Management Systems in Project Environments — 6 classes

- › 4.1 Assessing Safety Risks in Project Environments
- › 4.2 Designing Effective Safety Management Plans
- › 4.3 Engaging Stakeholders in Safety Initiatives
- › 4.4 Implementing Safety Training for Project Teams
- › 4.5 Monitoring and Evaluating Safety Performance
- › 4.6 Integrating Continuous Improvement into Safety Practices

• 5 Evaluating Project Outcomes: Safety Performance Metrics — 6 classes

- › 5.1 Define Key Safety Performance Metrics for Project Evaluation
- › 5.2 Analyze Historical Data to Establish Performance Baselines
- › 5.3 Identify Stakeholders for Gathering Safety Feedback
- › 5.4 Develop a Framework for Continuous Safety Improvement
- › 5.5 Implement Real-time Monitoring for Safety Metrics
- › 5.6 Present Findings and Recommendations to Stakeholders

• 1 Introduction to Safety Management Systems and ISO 12100 Principles — 6 classes

- › 1.1 Define the Purpose and Scope of Safety Management Systems
- › 1.2 Explore the Key Components of ISO 12100
- › 1.3 Identify Hazard Types in Machinery Operations
- › 1.4 Assess Risks Associated with Machinery Use
- › 1.5 Implement Control Measures for Safety Improvements
- › 1.6 Evaluate the Effectiveness of Safety Management Practices

• 2 Risk Assessment Methodologies in Machinery Safety — 6 classes

- › 2.1 Identify Key Risks in Machinery Operations
- › 2.2 Evaluate Risk Levels Using ISO 12100 Principles
- › 2.3 Apply Risk Assessment Techniques in Practical Scenarios
- › 2.4 Develop Risk Mitigation Strategies for Machinery
- › 2.5 Communicate Risk Findings to Stakeholders Effectively
- › 2.6 Review and Adjust Risk Assessments Based on Feedback

• 3 Implementing Safety Management Systems: Frameworks and Standards — 6 classes

- › 3.1 Assessing the Need for a Safety Management System
- › 3.2 Identifying Key Frameworks and Standards for Safety Management
- › 3.3 Establishing Safety Objectives and Policy within the Framework
- › 3.4 Implementing Risk Assessment Procedures in Safety Management
- › 3.5 Monitoring and Measuring Safety Performance Metrics
- › 3.6 Continuously Improving the Safety Management System

• 4 Monitoring and Measuring Safety Performance in Organizations — 6 classes

- › 4.1 Define Key Performance Indicators for Safety Management
- › 4.2 Establish Baseline Metrics for Safety Performance
- › 4.3 Implement Data Collection Methods for Safety Monitoring
- › 4.4 Analyze Safety Performance Data to Identify Trends
- › 4.5 Develop Action Plans Based on Safety Performance Insights
- › 4.6 Communicate Safety Performance Results to Stakeholders

• 5 Continuous Improvement in Safety Management: Audits and Reviews — 6 classes

- › 5.1 Identify Key Elements of Safety Audits and Reviews
- › 5.2 Analyze the Role of Continuous Improvement in Safety Management
- › 5.3 Develop Effective Audit Checklists for Machinery Safety
- › 5.4 Implement Review Processes to Enhance Safety Management Systems
- › 5.5 Evaluate Audit Findings and Recommend Safety Improvements
- › 5.6 Design a Continuous Improvement Plan for Safety Management

• 1 Foundations of Leadership in Occupational Safety — 6 classes

- › 1.1 Define the Core Principles of Safety Leadership
- › 1.2 Identify Key Roles and Responsibilities in Occupational Safety
- › 1.3 Analyze Effective Communication Strategies for Safety Leadership
- › 1.4 Evaluate the Impact of Workplace Culture on Safety Practices
- › 1.5 Implement Safety Leadership Techniques in Team Settings
- › 1.6 Develop an Action Plan for Continuous Improvement in Safety Leadership

• 2 Understanding Safety Regulations and ISO Standards — 6 classes

- › 2.1 Identify Key ISO Standards for Machinery Safety
- › 2.2 Explain the Importance of Safety Regulations in Team Leadership
- › 2.3 Analyze Case Studies of ISO Compliance in Machinery Safety
- › 2.4 Discuss Roles and Responsibilities in Implementing Safety Standards
- › 2.5 Evaluate Safety Risk Assessment Techniques under ISO 12100
- › 2.6 Develop an Action Plan for Upholding ISO Safety Standards in Teams

• 3 Risk Assessment and Management for Leaders — 6 classes

- › 3.1 Identify Key Components of Risk Assessment in Machinery Safety
- › 3.2 Analyze Common Hazards in Machinery Operations
- › 3.3 Evaluate Risk Levels Using Qualitative and Quantitative Methods
- › 3.4 Develop and Implement Control Measures for Identified Risks
- › 3.5 Communicate Risk Management Strategies to Your Team Effectively
- › 3.6 Review and Adjust Risk Management Practices Based on Feedback

• 4 Cultivating a Safety-First Culture — 6 classes

- › 4.1 Define and Communicate the Vision for a Safety-First Culture
- › 4.2 Identify Key Behaviors that Promote Safety in Teams
- › 4.3 Engage Employees in Safety Training and Awareness Initiatives
- › 4.4 Develop Strategies for Recognizing and Rewarding Safety Excellence
- › 4.5 Implement Open Communication Channels for Safety Concerns
- › 4.6 Evaluate and Adjust Safety Practices through Feedback Mechanisms

• 5 Evaluating and Improving Safety Leadership Practices — 6 classes

- › 5.1 Assess Current Safety Leadership Practices
- › 5.2 Identify Key Leadership Attributes for Safety
- › 5.3 Analyze the Impact of Leadership on Safety Culture
- › 5.4 Develop Action Plans for Safety Leadership Improvement
- › 5.5 Implement Strategies to Enhance Safety Communication
- › 5.6 Evaluate the Effectiveness of Leadership Safety Initiatives