

# LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

## ISO 12207 — Systems and Software Lifecycle Processes

*ISO Certification Programme*



---

### LAPT — London Academy of Professional Training

**Address** 85 Great Portland Street, W1W 7LT, London, United Kingdom

**Email** [info@lapt.org](mailto:info@lapt.org)

**Telephone** +44 7513 283044

**Web** [lapt.org](http://lapt.org)

**Reference** IIT-COD-12207 • ISO IT & Related Technologies

UKPRN 10067351 • Registered in England and Wales, company 4984798

AT A GLANCE

|               |                                                |
|---------------|------------------------------------------------|
| REFERENCE     | IIT-COD-12207                                  |
| AWARD         | Certificate                                    |
| ASSESSMENT    | 430 marks — 258 to pass (60%)                  |
| PREREQUISITES | None                                           |
| VALIDITY      | Lifetime                                       |
| AWARDING BODY | LAPT — London Academy of Professional Training |

CURRICULUM

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div>1</div><div>Introduction to ISO 12207</div><div>5 chapters · 30 classes 65 marks</div></div> <div><div><div>• 1 Overview of ISO 12207 and its Importance in Software Development — 6 classes</div><div><div>› 1.1 Define ISO 12207 and its Purpose in Software Development</div><div>› 1.2 Identify Key Processes Within ISO 12207 Framework</div><div>› 1.3 Discuss the Benefits of Adopting ISO 12207 Standards</div><div>› 1.4 Explore the Role of ISO 12207 in Risk Management</div><div>› 1.5 Analyze Case Studies Demonstrating ISO 12207 Implementation</div><div>› 1.6 Develop a Plan for Integrating ISO 12207 in Your Projects</div></div></div><div><div>• 2 Key Components of the Software Lifecycle in ISO 12207 — 6 classes</div><div><div>› 2.1 Define Key Terms in ISO 12207</div><div>› 2.2 Identify Phases of the Software Lifecycle</div><div>› 2.3 Examine Roles and Responsibilities in ISO 12207</div><div>› 2.4 Analyse the Importance of Software Process Models</div><div>› 2.5 Evaluate Quality Assurance Activities in the Lifecycle</div><div>› 2.6 Apply ISO 12207 Principles to a Case Study</div></div></div><div><div>• 3 Roles and Responsibilities in ISO 12207 Implementation — 6 classes</div><div><div>› 3.1 Identify Key Stakeholders in ISO 12207 Implementation</div><div>› 3.2 Define Responsibilities of Project Managers in ISO 12207</div><div>› 3.3 Analyze Roles of Quality Assurance Teams in Software Lifecycle</div><div>› 3.4 Examine the Contribution of Developers in ISO 12207 Processes</div><div>› 3.5 Assess the Impact of Leadership on ISO 12207 Adoption</div><div>› 3.6 Develop a Roles and Responsibilities Matrix for ISO 12207</div></div></div><div><div>• 4 Tailoring ISO 12207 for Project Needs — 6 classes</div><div><div>› 4.1 Define Project Objectives for Tailoring ISO 12207</div><div>› 4.2 Identify Key Processes in ISO 12207 for Your Project</div><div>› 4.3 Analyze Stakeholder Needs for Tailored Implementation</div><div>› 4.4 Develop a Tailoring Strategy Based on Project Scope</div><div>› 4.5 Create a Tailoring Template for Project Compliance</div><div>› 4.6 Evaluate and Adjust Tailored Processes During Project Lifecycle</div></div></div><div><div>• 5 Assessing Compliance and Continuous Improvement in ISO 12207 — 6 classes</div><div><div>› 5.1 Identify Key Compliance Requirements in ISO 12207</div><div>› 5.2 Analyze Current Processes Against ISO 12207 Standards</div><div>› 5.3 Develop Metrics for Assessing Compliance Levels</div><div>› 5.4 Implement Audit Procedures for Continuous Improvement</div><div>› 5.5 Evaluate Audit Results and Identify Improvement Opportunities</div><div>› 5.6 Create an Action Plan for Enhancing Compliance and Process Quality</div></div></div></div> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

3

## Process Management and Improvement

5 chapters · 30 classes

85 marks

### • 1 Fundamentals of Process Management in Software Development

— 6 classes

- › 1.1 Define the Key Concepts of Process Management in Software Development
- › 1.2 Analyze the Importance of ISO 12207 in Software Lifecycle Processes
- › 1.3 Identify Different Phases of the Software Development Lifecycle
- › 1.4 Explore Best Practices for Process Improvement in Software Projects
- › 1.5 Evaluate Real-World Applications of Process Management Frameworks
- › 1.6 Develop a Basic Process Improvement Plan for a Software Project

### • 2 Understanding ISO 12207: Framework and Principles — 6 classes

- › 2.1 Identify Key Components of ISO 12207 Framework
- › 2.2 Explain Process Categories in Software Lifecycle
- › 2.3 Discuss Principles Guiding Process Management
- › 2.4 Analyze Real-World Applications of ISO 12207
- › 2.5 Develop a Process Improvement Plan Using ISO 12207
- › 2.6 Evaluate Case Studies in ISO 12207 Implementation

### • 3 Identifying and Mapping Software Processes — 6 classes

- › 3.1 Define the Key Components of Software Processes
- › 3.2 Explore the ISO 12207 Framework and Its Relevance
- › 3.3 Identify Stakeholders in Software Lifecycle Processes
- › 3.4 Analyze Existing Software Processes Within Your Organization
- › 3.5 Create a Process Mapping Diagram for Software Development
- › 3.6 Evaluate and Improve Mapped Software Processes Based on Best Practices

### • 4 Process Improvement Techniques Based on ISO 12207 — 6 classes

- › 4.1 Analyze Current Processes Using ISO 12207 Framework
- › 4.2 Identify Key Improvement Areas in Software Lifecycle
- › 4.3 Explore Process Measurement Techniques for Evaluation
- › 4.4 Develop Strategies for Process Enhancement Initiatives
- › 4.5 Implement Continuous Improvement Practices Based on Feedback
- › 4.6 Assess Impact of Improvements on Overall Process Efficiency

### • 5 Leadership in Process Management and Stakeholder Engagement — 6 classes

- › 5.1 Define Leadership Roles in Process Management
- › 5.2 Identify Key Stakeholders in Software Development
- › 5.3 Analyze Stakeholder Needs and Expectations
- › 5.4 Develop Communication Strategies for Stakeholder Engagement
- › 5.5 Implement Leadership Techniques for Process Improvement
- › 5.6 Measure the Impact of Leadership on Stakeholder Satisfaction

4

## Project Planning and Execution

0 chapters

65 marks

5

## Quality Assurance in Software Development

5 chapters · 6 classes

65 marks

### • 1 Understanding Quality Assurance in Software Development — 6 classes

- › 1.1 Define Key Quality Assurance Concepts in Software Development
- › 1.2 Identify the Importance of Quality Assurance in the Software Lifecycle
- › 1.3 Explore Quality Assurance Processes and Methodologies
- › 1.4 Analyze Common Quality Assurance Tools and Techniques
- › 1.5 Evaluate the Role of Quality Assurance in Continuous Improvement
- › 1.6 Apply Quality Assurance Best Practices to Real-World Scenarios

### • 2 ISO 12207 Standards and Quality Metrics

### • 3 Integrated Quality Assurance Practices

### • 4 Risk Management in Quality Assurance

### • 5 Continuous Improvement and Quality Assurance Strategies

**• 1 Introduction to Software Lifecycle Models** — 6 classes

- › 1.1 Define Software Lifecycle Models and Their Importance
- › 1.2 Identify Key Characteristics of Different Software Lifecycle Models
- › 1.3 Compare and Contrast Waterfall and Agile Software Lifecycle Models
- › 1.4 Explore Iterative and Incremental Approaches in Software Development
- › 1.5 Assess the Suitability of Lifecycle Models for Various Projects
- › 1.6 Apply Software Lifecycle Models to Real-World Case Studies

**• 2 Waterfall Model: Fundamentals and Applications** — 6 classes

- › 2.1 Define the Waterfall Model and Its Key Characteristics
- › 2.2 Identify the Phases of the Waterfall Model
- › 2.3 Analyze Advantages of the Waterfall Model in Software Development
- › 2.4 Examine Limitations and Challenges of the Waterfall Model
- › 2.5 Illustrate Real-World Applications of the Waterfall Model
- › 2.6 Compare the Waterfall Model with Other Software Lifecycle Models

**• 3 Iterative and Incremental Development Models** — 6 classes

- › 3.1 Define Iterative Development and Its Key Concepts
- › 3.2 Explain the Principles of Incremental Development
- › 3.3 Compare Iterative and Incremental Development Models
- › 3.4 Identify Advantages and Disadvantages of Each Model
- › 3.5 Analyze Real-World Applications of Iterative and Incremental Models
- › 3.6 Create a Simple Software Project Plan Using Iterative and Incremental Approaches

**• 4 Agile Methodologies and their Lifecycle Impact** — 6 classes

- › 4.1 Explore the Core Principles of Agile Methodologies
- › 4.2 Analyze the Differences Between Agile and Traditional Models
- › 4.3 Investigate Agile Lifecycle Stages and Their Significance
- › 4.4 Apply Scrum Framework to a Sample Project Scenario
- › 4.5 Evaluate Team Dynamics and Roles in Agile Environments
- › 4.6 Design a Prototype Sprint Plan for Agile Implementation

**• 5 Choosing the Right Model: Best Practices and Considerations** — 6 classes

- › 5.1 Analyze Software Lifecycle Models: Overview and Key Characteristics
- › 5.2 Evaluate Project Requirements: Identifying Stakeholder Needs
- › 5.3 Compare Common Lifecycle Models: Agile, Waterfall, and Iterative Approaches
- › 5.4 Assess Organizational Fit: Aligning Models with Business Goals
- › 5.5 Implement Best Practices: Tailoring Models for Specific Projects
- › 5.6 Develop a Model Selection Strategy: Decision-Making Framework