

LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

ISO 42010 — Software Architecture Description

ISO Certification Programme



LAPT — London Academy of Professional Training

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Reference IIT-COD-42010 • ISO IT & Related Technologies

UKPRN 10067351 • Registered in England and Wales, company 4984798

AT A GLANCE

REFERENCE	IIT-COD-42010
AWARD	Certificate
ASSESSMENT	430 marks — 258 to pass (60%)
PREREQUISITES	None
VALIDITY	Lifetime
AWARDING BODY	LAPT — London Academy of Professional Training

CURRICULUM

1

Architectural Concepts and Frameworks

5 chapters · 30 classes 85 marks

• 1 Fundamentals of Software Architecture Concepts — 6 classes

› 1.1 Define Key Software Architecture Concepts

› 1.2 Explore Architectural Design Principles

› 1.3 Identify Common Architectural Frameworks

› 1.4 Analyze the Role of Stakeholders in Architecture

› 1.5 Evaluate Architectural Decisions and Trade-offs

› 1.6 Apply Concepts to Create a Simple Architectural Model

• 2 Key Architectural Styles and Patterns — 6 classes

› 2.1 Explore Common Architectural Styles in Software Design

› 2.2 Identify Key Characteristics of Layered Architecture

› 2.3 Analyze the Role of Microservices in Modern Applications

› 2.4 Distinguish Between Monolithic and Service-Oriented Architectures

› 2.5 Evaluate the Benefits of Event-Driven Architectures

› 2.6 Apply Architectural Patterns to Real-World Scenarios

• 3 Principles of Architectural Design and Decision Making — 6 classes

› 3.1 Understand Key Principles of Architectural Design

› 3.2 Explore Frameworks for Effective Decision Making

› 3.3 Identify Stakeholder Needs in Architectural Contexts

› 3.4 Evaluate Trade-offs in Architectural Decisions

› 3.5 Apply Design Principles to Real-World Scenarios

› 3.6 Develop a Personal Architectural Decision-Making Framework

• 4 Frameworks and Methodologies in Software Architecture — 6 classes

› 4.1 Define Key Software Architecture Frameworks

› 4.2 Analyze the Role of Methodologies in Software Architecture

› 4.3 Compare and Contrast Popular Architectural Frameworks

› 4.4 Evaluate the Impact of Frameworks on Software Development

› 4.5 Apply a Software Architecture Framework to a Real-world Scenario

› 4.6 Reflect on Best Practices for Implementing Frameworks in Projects

• 5 Evaluating and Documenting Software Architecture — 6 classes

› 5.1 Understand Key Principles of Software Architecture Evaluation

› 5.2 Identify Stakeholders and Their Architectural Concerns

› 5.3 Explore Evaluation Criteria for Software Architecture Quality

› 5.4 Analyze Existing Software Architecture Documentations

› 5.5 Apply Evaluation Techniques to Real-World Scenarios

› 5.6 Create Comprehensive Documentation for Architecture Evaluation

2 Architecture Description Standards 5 chapters · 30 classes 65 marks • 1 Fundamentals of Architecture Description Standards — 6 classes › 1.1 Define Architecture Description Standards and Their Importance › 1.2 Identify Key Components of Architecture Description › 1.3 Explore Different Architecture Frameworks and Their Standards › 1.4 Examine the Role of Stakeholders in Architecture Description › 1.5 Analyze Case Studies of Effective Architecture Descriptions › 1.6 Apply Architecture Description Standards in a Practical Scenario • 2 ISO 42010 Framework and Structure — 6 classes › 2.1 Explore the ISO 42010 Framework Overview › 2.2 Identify Key Components of Architecture Description › 2.3 Analyze the Importance of Stakeholder Concerns in Architecture › 2.4 Distinguish Between Architectural Views and Viewpoints › 2.5 Implement Practices for Consistent Architecture Descriptions › 2.6 Evaluate Real-World Applications of ISO 42010 Standards • 3 Stakeholder Engagement and Requirements Capture — 6 classes › 3.1 Identify Key Stakeholders in Software Architecture › 3.2 Analyze Stakeholder Needs and Perspectives › 3.3 Define Requirements Gathering Techniques › 3.4 Create Effective Communication Strategies for Stakeholder Engagement › 3.5 Synthesize Stakeholder Feedback into Architectural Requirements › 3.6 Explore Best Practices for Continuous Stakeholder Involvement • 4 Modeling Techniques for Effective Architecture Descriptions — 6 classes › 4.1 Identify Core Modeling Techniques for Architecture Descriptions › 4.2 Analyze the Role of UML in Software Architecture › 4.3 Apply Diagrams to Visualize Architectural Components › 4.4 Evaluate Architectural Models for Clarity and Precision › 4.5 Integrate Patterns in Architecture Modeling › 4.6 Develop a Comprehensive Architecture Description Using Selected Techniques • 5 Evaluating and Validating Architecture Descriptions — 6 classes › 5.1 Understand the Importance of Architecture Descriptions › 5.2 Identify Key Components of Architecture Descriptions › 5.3 Explore Evaluation Criteria for Architecture Descriptions › 5.4 Develop Techniques for Validating Architecture Descriptions › 5.5 Apply Evaluation Methods to Real-World Architecture Cases › 5.6 Create a Validation Report for an Architecture Description	
3 Communication Strategies 5 chapters · 6 classes 65 marks • 1 Understanding the Importance of Communication in Software Architecture — 6 classes › 1.1 Define Key Communication Concepts in Software Architecture › 1.2 Identify Stakeholders and Their Communication Needs › 1.3 Explore Effective Communication Channels for Architecture Teams › 1.4 Analyze Common Communication Barriers in Software Projects › 1.5 Develop Strategies for Clear Architectural Documentation › 1.6 Create a Communication Plan for Software Architecture Projects • 2 Identifying Stakeholders and Their Communication Needs • 3 Developing Clear Communication Plans for Architecture Descriptions • 4 Utilizing Visual Communication Tools in Architecture Descriptions • 5 Evaluating and Improving Communication Strategies in Software Projects	
4 Evaluation of Architectural Decisions 0 chapters 65 marks	
5 Leadership in Software Architecture 0 chapters 85 marks	

• 1 Understanding Stakeholders and Their Importance in Software**Architecture** — 6 classes

- › 1.1 Identify Key Stakeholders in Software Projects
- › 1.2 Analyze Stakeholder Influences and Interests
- › 1.3 Classify Stakeholders Based on Engagement Levels
- › 1.4 Assess Stakeholder Needs and Expectations
- › 1.5 Develop Communication Strategies for Stakeholders
- › 1.6 Evaluate Stakeholder Feedback for Continuous Improvement

• 2 Identifying Stakeholders: Techniques and Best Practices — 6

classes

- › 2.1 Define Stakeholders and Their Importance in Software Architecture
- › 2.2 Explore Effective Techniques for Identifying Stakeholders
- › 2.3 Utilize Stakeholder Mapping Tools to Visualize Relationships
- › 2.4 Conduct Interviews to Gather Stakeholder Insights
- › 2.5 Analyze Stakeholder Needs and Expectations
- › 2.6 Apply Best Practices for Engaging Stakeholders Throughout the Project

• 3 Analyzing Stakeholder Needs and Expectations — 6 classes

- › 3.1 Identify Key Stakeholders in Software Architecture Projects
- › 3.2 Gather Stakeholder Requirements through Effective Interviews
- › 3.3 Analyze Stakeholder Expectations Using SWOT Techniques
- › 3.4 Prioritize Stakeholder Needs in Architecture Design
- › 3.5 Communicate Findings to Stakeholders Effectively
- › 3.6 Evaluate and Adapt Stakeholder Analysis in Project Lifecycle

• 4 Communicating with Stakeholders: Strategies for Engagement —

6 classes

- › 4.1 Identify Key Stakeholders for Effective Communication
- › 4.2 Analyze Stakeholder Needs and Expectations
- › 4.3 Develop Tailored Messaging Strategies
- › 4.4 Choose Appropriate Communication Channels
- › 4.5 Facilitate Stakeholder Engagement Workshops
- › 4.6 Evaluate Communication Effectiveness and Adjust Strategies

• 5 Evaluating and Managing Stakeholder Engagement and Influence

— 6 classes

- › 5.1 Identify Key Stakeholders in Software Architecture
- › 5.2 Assess Stakeholder Influence on Architectural Decisions
- › 5.3 Analyze Stakeholder Needs and Expectations
- › 5.4 Map Stakeholder Engagement Strategies
- › 5.5 Evaluate the Effectiveness of Stakeholder Communication
- › 5.6 Develop a Stakeholder Management Plan for Projects