

## Software Architecture

Length : 4 Days  
Delivery Method : Instructor-led (Classroom)

### Course Overview

The aim of the Iasa Software Architecture training is to transform an IT professional into an expert in many categories, with hands-on experience traversing multiple industries and disciplines.

At the end of this course you will have: a clear understanding of the four primary aspects of solution architecture and the aptitude for working with critical stakeholders to deliver the solutions; mastered a variety of hardware platforms including mainframes, distributed platforms, desktops and mobile devices; grasped the inner-workings of a host of operating systems and databases.

You shall be the communication expert to the stakeholders while working within the team throughout project lifecycles to ensure appropriate delivery of technology strategies.

### Audience Profile

Software Architecture promises to open the door to career advancement for software and IT professional. Recommended for:

- System Analysts, IT Analysts, Web Analysts
- Programmer Analysts
- Software Engineers, Software Designers
- Project Leaders, Project Manager
- SQA Managers
- Software Testers
- Software Consultants
- Software Configuration Management personnel
- Web Analysts
- Junior and Associate Software Architects
- Technical Decision Makers
- IT Management team members

### Objectives

The participant shall become competent in:

- Functioning as project delivery architect using common, proven techniques and procedures.
- Establishment solution architecture for midsize to large projects.

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- Standard measurement metrics and quality attributes.
- The concepts of architecture tools and how they integrate with the SDLC.
- Development and delivery of solutions and communication strategies based on sound value management techniques.
- Managing the expectations of stakeholders and key team members.

## **Course Outline:**

### **Module 1: Software Architecture Fundamentals**

#### **Lessons:**

- Lesson 1 – Various roles and teams
- Lesson 2 – Viewpoints and Terminology
- Lesson 3 – Software Architecture Principles
- Lesson 4 – System Structures

### **Module 2: Software Construction**

#### **Lessons:**

- Lesson 1 – Application Development
- Lesson 2 – Programming Patterns
- Lesson 3 – Software Construction Process
- Lesson 4 – Technology Platform

### **Module 3: Components, Frameworks and Tools**

#### **Lessons:**

- Lesson 1 – Client Programming and UX (User Experience)
- Lesson 2 – Client, Server and Storage Technologies
- Lesson 3 – Build and Connect Software Components
- Lesson 4 – Database Programming

### **Module 4: Service Network**

#### **Lessons:**

- Lesson 1 – Asynchronous and Synchronous Computing
- Lesson 2 – Service Oriented Architecture (SOA)
- Lesson 3 – Messaging, XML and B2B
- Lesson 4 – Application and Service Management

### **Module 5: Architectural Process, Methods and Artifacts**

#### **Lessons:**

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- Lesson 1 – Software Architecture Modeling
- Lesson 2 – Software Quality Assurance and Total Quality Assurance
- Lesson 3 – Code Quality Analysis
- Lesson 4 – Software Complexity

### **Module 6: Architecture throughout the Lifecycle**

#### **Lessons:**

- Lesson 1 – Working with other Architect roles
- Lesson 2 – Software Architecture Governance
- Lesson 3 – Build, Deployment and Delivery
- Lesson 4 – Software Service Transition

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