

## OUTLINE

### Course Description:

### Course Objectives:

By the end of the course, you should be able to meet the following objectives:

- Understand the Salesforce multitenant architecture and Apex execution context
- Write, debug, and optimize Apex classes, triggers, and test methods
- Apply object-oriented programming principles within Apex
- Implement business logic using triggers, asynchronous Apex, and platform events
- Handle exceptions and enforce security using Apex best practices
- Integrate Salesforce with external systems using REST and SOAP APIs
- Write effective unit tests to achieve required code coverage and ensure deployment readiness
- Optimize performance while adhering to governor limits
- Prepare for real-world development scenarios and the Salesforce Platform Developer I certification exam

### Audience:

- Salesforce Administrators transitioning to developer roles
- Software developers new to the Salesforce platform
- Technical consultants and solution architects
- IT professionals involved in Salesforce customization and integrations
- Individuals preparing for Salesforce Platform Developer I certification

### Prerequisites:

Candidate should have a basic foundation of Salesforce knowledge.

- Strong understanding of Salesforce administration and data model concepts
- Basic knowledge of programming concepts such as variables, loops, and classes
- Familiarity with object-oriented programming (Java, C#, or similar preferred)
- Experience with Salesforce configuration tools (App Builder level or equivalent)

### Duration:

5 days

### Course Topics:

Module 1: Apex Fundamentals (4 Hours)

- What is Apex
- Syntax & Data Types
- SOQL & DML Basics
- Governor Limits

Module 2: Apex Triggers (6 Hours)

- Before & After Triggers
- Context Variables
- Trigger Events
- Trigger Best Practices (One Trigger per Object)

Module 3: Collections & Apex OOP Concepts (5 Hours)

- Lists, Sets, Maps
- Classes & Objects
- Constructors
- Inheritance, Interfaces

Module 4: SOQL & Advanced Queries (5 Hours)

- Relationship Queries
- Aggregate Functions
- Subqueries
- Handling Limits in Queries

Module 5: Apex Exceptions & Debugging (3 Hours)

- Try-Catch
- Custom Exceptions
- Debug Logs

Module 6: Apex Asynchronous Processing (5 Hours)

- Future Methods
- Batch Apex
- Queueable Apex
- Schedulable Apex

Module 7: Testing & Deployment (6 Hours)

- Writing Test Classes
- Test Data Factories
- Test Setup Method
- Code Coverage Requirements

Module 8: Apex Integration Basics (6 Hours)

- Callouts to External Systems
- REST & SOAP Callouts
- Named Credentials
- JSON & XML Parsing