

**Programmatic Development using Apex and Visualforce in Lightning Experience**

**Course Number:** SFA-100  
**Duration:** 5 days

**Overview**

This Programmatic Development using Apex and Visualforce in Lightning Experience training course teaches experienced software developers the basics of Apex and Visualforce and best practices for integrating Salesforce® with other systems. This class is an alternative to the Programmatic Development using Apex and Visualforce (DEX450) class offered by Salesforce. The Accelebrate version of the class offers relevant, real-world programming examples and costs less.

This course is appropriate preparation for the [Salesforce Certified Platform Developer I exam](https://developer.salesforce.com/resources2/certification-site/files/SGCertifiedPlatformDeveloperI.pdf).

**Prerequisites**

All students must have object-oriented programming experience.

**Materials**

All Salesforce training students will receive comprehensive courseware.

**Software Needed on Each Student PC**

* Salesforce CLI installed
* Visual Studio Code, with Salesforce Extension Pack
* Latest version of Google Chrome browser
* Web access to create and use a Salesforce Developer Edition practice site
* Access to email during class to follow Salesforce verification links

**Objectives**

* Learn the fundamentals of declarative development on the Salesforce Platform (formerly known as Force.com®), including custom and standard objects, fields, security, workflow, approval processes, and validation rules
* Work with common Salesforce Platform development tools, including Visual Studio  Code, the Developer’s Workbench, and the Developer Console
* Understand the software development lifecycle on the Salesforce Platform and utilizing the Metadata API, Unmanaged Packages, Managed Packages, and Change Sets
* Learn Apex fundamentals, including developing Apex triggers, developing Visualforce custom controllers and controller extensions using Apex, developing email services using Apex, sending emails using Apex and Workflow, and developing test methods.
* Learn Visualforce fundamentals, including consuming standard and custom controllers and controller extensions using Visualforce, utilizing CSS within Visualforce pages, embedding a Salesforce chart on a Visualforce page, utilizing Field Sets, and embedding a Visualforce page in a dashboard

**Outline**

* Introduction
  + Course Overview
  + Setting up a Practice Site
  + Developing on the Force.com platform
  + Salesforce DX
  + Data Modeling/Management
  + Declarative Development Review
* Apex Introduction
  + Apex Fundamentals
  + Apex Data Types and Variables
  + Apex Control Flow
  + Apex Classes
  + Apex Interfaces
* Salesforce Languages
  + Salesforce Object Query Language (SOQL)
  + Salesforce Object Search Language(SOSL)
  + Data Manipulation Language (DML)
  + Apex Triggers
* Triggers and Debugging
  + Order of Execution
  + Debugging
  + Apex Triggers II
  + One Trigger per Object
* Advanced Apex
  + Asynchronous Apex Fundamentals
  + Future Methods
  + Batch Apex
  + Queueable Apex
  + Apex Scheduler
  + Testing Apex
* Visualforce
  + Visualforce Fundamentals
  + Visualforce Pages
  + Visualforce Controllers
  + Visualforce Components
* Lightning
  + Lightning Components
  + Events/Properties
  + Lightning Web Components
  + Lightning Design System
  + Lightning Data Service
* Deployment and Packages
  + Apex Integrations
  + Platform Events
  + Deployment
  + Change Sets
  + Deploying with VS Code
  + Packages
* Review and Certification Test
  + Course Review
  + Course Survey
  + Practice Certification Test
  + Review Certification Test
  + Questions and Answers/Closing