

Document Generated: 12/18/2025

Learning Style: Virtual Classroom

Technology:

Difficulty: Advanced

Course Duration: 3 Days

## Python® Programming: Advanced (LO-94012)



### About this course:

Python® keeps on being a well-known programming language, possibly because of its capacity to complete a ton of work in a few lines of code, and its flexibility. Python is helpful for creating custom software applications, tools, cloud applications, and web services. With this course you can expand upon your fundamental Python abilities, learning further developed topics, for example, development of graphical user interfaces, object-oriented programming patterns, threading, unit testing, data management, and installing as well as creating packages and executable applications.

The normal pay for Python Developer is \$115,222 every year.

## **Course Objectives:**

- Store information in a database from applications of Python.
- Plan and make a GUI.
- Make object-oriented applications of Python.
- Deal with numerous procedures with threading.
- Communicate utilizing server/client protocols of the network.
- Execute unit testing.

## **Audience:**

This course is intended for existing programmers of Python who have minimum experience of one year in Python programming and who need to grow their proficiencies in Python.

## **Prerequisites:**

You ought to have involvement in Python and object-oriented programming.

## **Course Outline:**

### **Lesson 1: Using Object-Oriented Python**

**Topic A:** Create and Use Classes in an Application

**Topic B:** Use Magic Methods

**Topic C:** Incorporate Class Factories

### **Lesson 2: Creating a GUI**

**Topic A:** Design a GUI

**Topic B:** Create and Arrange a GUI Layout

**Topic C:** Interact with User Events

### **Lesson 3: Using Databases**

**Topic A:** Basics of Data Management

**Topic B:** Use SQLite Databases

**Topic C:** Manipulate SQL Data

### **Lesson 4: Network Programming**

**Topic A:** Basics of Network Programming

**Topic B:** Create a Client/Server Program

## **Lesson 5: Managing Multiple Processes with Threading**

**Topic A:** Create a Threaded Application

**Topic B:** Manage Thread Resources

## **Lesson 6: Implementing Unit Testing**

**Topic A:** Test-Driven Development

**Topic B:** Write and Run a Unit Test Case

**Topic C:** Create a Test Suite

## **Lesson 7: Packaging an Application for Distribution**

**Topic A:** Create a Package Structure

**Topic B:** Generate the Package Distribution Files

**Topic C:** Generate a Windows Executable