

# Advanced Python Programming

Duration 3 Days

## COURSE DESCRIPTION

In this course, we'll take a deep dive into several advanced concepts of the **'Python'** ecosystem and explore larger-scale application development using the language. Students will also develop an understanding of the issues associated with more extensive workshops and exercises. For example, creating class and inherited subclass from superclass, Implementing polymorphism. Students will also learn standard python API and Python Technique to implement date & time, GUI, XML, CSV, JSON and so on. At the end of this 'Advanced Python Programming' course, students will have the necessary tools to both continue into web/application development as well as gaining knowledges and skills of industry-standard tools and techniques for working within a development team. The course is supplemented with many hands-on labs, solutions, and code examples.

## COURSE OUTLINE

### Day 1

- CH1 - Object-Oriented in Python
  - Object-Oriented Concept
  - OO Main Features
    - Encapsulation
    - Inheritance
    - Polymorphism
  - Implementing OOP
- CH2 - Design with Iterator
  - What is an Iterator?
  - Problems
  - Build your own Iterator
- CH3 - Design with Generator
  - What is Generator?
  - Implementing Generators
  - Using Generator

### Day 2

- CH4 - Closure & Decorator
  - What is Closure?
  - When to use Closures
  - Implementing Closure
  - What is Decorator?
  - Implementing Decorator
  - Benefit of Decorator
- CH5 - Lambda
  - What is Lambda?

- Lambda Syntax
- How to implement Lambda
- Practical Uses of Python lambda function
- CH6 - Python Data
  - + All about Data
  - Object
  - File
    - CSV
    - JSON
  - RDBMS (Database Server)
  - CRUD Operations

### Day 3

- CH7 - Concurrency with Python
  - What concurrency
  - Python Threading
- CH8 - Network Programming
  - Client-Server Model
  - Socket
  - HTTP
- CH9 - Write Python Application

### WHO SHOULD ATTEND

- Python Programmer, Python Developer or Software Engineer
- Anyone who has done the basics of Python and wishes to become a pro in Python by developing advanced Applications

### PREREQUISITES

Python Foundation and Python Programming