

Python Intermediate (3 Months)

Duration: 3 Months (~120 Hours)

Mode: Live Online / Classroom

Designation after completion: Python Developer

Tools & Technologies: Python 3.x, Virtualenv, Pytest, JSON/XML, APIs

Certifications prepared: PCAP / PCEP Intermediate Python

Detailed Syllabus (12 Weeks)

Week 1

- Inheritance (single, multiple, multilevel)
- Method overriding
- Assignment → Vehicle → Car → ElectricCar model

Week 2

- Polymorphism
- Abstract classes & Mixins
- Assignment → Payment system with multiple gateways

Week 3

- Decorators
- Generators
- Iterators
- Assignment → Fibonacci iterator

Week 4

- Context managers
- Custom exceptions
- Assignment → Safe file handler
- Mock Interview 1

Week 5

- Python Standard Library
- Creating reusable modules
- Assignment → Utility module

Week 6

- Virtualenv, pipenv
- requirements.txt

-
- Assignment → Package setup

Week 7

- CSV, JSON, XML parsing
- Assignment → CSV → JSON converter

Week 8

- REST APIs with requests
- Handling responses
- Assignment → Weather API fetcher
- Mock Interview 2

Week 9

- Logging basics
- ConfigParser
- Assignment → Log system

Week 10

- unittest basics
- pytest
- TDD concepts
- Assignment → Calculator test cases

Week 11

- Debugging (PDB, VS Code)
- Profiling
- Assignment → Optimize app

Week 12

- Mini Projects: Weather App, Log Analyzer
- Mock Interview 3

Mini Projects

Weather App with APIs
Log Analyzer