

Python Developer 30-Day Syllabus – Daily Topics

- Day 1 – Python Basics: Syntax, Variables, Data Types, and Operators
- Day 2 – Conditional Statements and Loops
- Day 3 – Functions, Scope, and Lambda Expressions
- Day 4 – Lists, Tuples, Sets, and Dictionaries
- Day 5 – String Manipulation and Formatting
- Day 6 – File Handling (Read, Write, Append)
- Day 7 – Exception Handling and Debugging
- Day 8 – Object-Oriented Programming (OOP) – Classes and Objects
- Day 9 – OOP – Inheritance, Polymorphism, Encapsulation, Abstraction
- Day 10 – Modules, Packages, and Virtual Environments
- Day 11 – Working with Date, Time, and JSON
- Day 12 – Python Libraries Overview (os, sys, math, random, re)
- Day 13 – NumPy Basics: Arrays, Indexing, and Vectorization
- Day 14 – Pandas Basics: DataFrames, Series, and Data Cleaning
- Day 15 – Matplotlib Basics: Plotting and Visualization
- Day 16 – Database Integration: PostgreSQL/MySQL with SQLAlchemy
- Day 17 – REST API Integration using requests module
- Day 18 – Web Scraping with BeautifulSoup and requests
- Day 19 – Flask Introduction and Setup
- Day 20 – Flask Routing, Templates, and Static Files
- Day 21 – Flask Forms, CRUD, and SQLAlchemy ORM
- Day 22 – Authentication and Session Management in Flask
- Day 23 – REST API Development using Flask (GET, POST, PUT, DELETE)
- Day 24 – Unit Testing with unittest and pytest
- Day 25 – Logging, Error Handling, and Config Management
- Day 26 – Django Introduction: Project and App Structure
- Day 27 – Django Models, Views, Templates (MVT Architecture)
- Day 28 – Django REST Framework (DRF) Basics
- Day 29 – Deployment with Docker and Jenkins (CI/CD Basics)
- Day 30 – Final Project: Full Stack CRUD App with Flask or Django