Full Stack Python Developer Syllabus

Python Programming Basics

- Syntax and Variables

- Data Types

- Operators

- Control Flow

- Functions

- Exception Handling

- Modules and Packages

- File Handling

Object-Oriented Programming

- Classes and Objects

- Inheritance

- Polymorphism

- Encapsulation

- Abstraction

- Special Methods

- Class and Static Methods

Data Structures & Algorithms in Python

- Lists, Tuples, Sets, Dictionaries

- Stacks, Queues, Linked Lists

- Trees and Graphs

- Searching and Sorting

- Recursion

- Time and Space Complexity

Database Management

- SQL Basics

- MySQL/PostgreSQL

- CRUD Operations

- Joins and Indexes

- ORM with SQLAlchemy

- MongoDB (NoSQL Basics)

Web Development (Frontend Basics)

- HTML5

- CSS3

- JavaScript Basics

- Bootstrap

- Responsive Design

Flask Framework (Backend)

- Routing and Views

- Templates (Jinja2)

- Forms Handling

- Sessions & Cookies

- REST APIs with Flask

- Blueprints

- Error Handling

- Flask Extensions

Django Framework (Optional/Advanced)

- MVC/MVT Architecture

- Django ORM

- Admin Interface

- Authentication

- Middlewares

- Django REST Framework

APIs and JSON

- RESTful API Design

- Consuming APIs

- JSON Handling

- Postman Testing

Version Control & GitHub

- Git Basics

- Branching and Merging

- GitHub Workflow

- Pull Requests

- Collaborative Development

Deployment and DevOps Basics

- Virtual Environments

- Gunicorn & WSGI

- Docker Basics

- CI/CD Overview

- Deployment to Heroku/Vercel/Render

- Nginx Basics

- Hosting Static Files

Project Development

- Planning a Full Stack Project

- Frontend Integration with Backend

- CRUD Application

- Authentication System

- Mini Projects and Capstone Project

6-Month Full Stack Python Study Plan

04-Aug-2025: Python Programming Basics - Syntax and Variables

06-Aug-2025: Python Programming Basics - Data Types

08-Aug-2025: Python Programming Basics - Operators

10-Aug-2025: Python Programming Basics - Control Flow

12-Aug-2025: Python Programming Basics - Functions

14-Aug-2025: Python Programming Basics - Exception Handling

16-Aug-2025: Python Programming Basics - Modules and Packages

18-Aug-2025: Python Programming Basics - File Handling

20-Aug-2025: Object-Oriented Programming - Classes and Objects

22-Aug-2025: Object-Oriented Programming - Inheritance

24-Aug-2025: Object-Oriented Programming - Polymorphism

26-Aug-2025: Object-Oriented Programming - Encapsulation

28-Aug-2025: Object-Oriented Programming - Abstraction

30-Aug-2025: Object-Oriented Programming - Special Methods

01-Sep-2025: Object-Oriented Programming - Class and Static Methods

03-Sep-2025: Data Structures & Algorithms in Python - Lists, Tuples, Sets, Dictionaries

05-Sep-2025: Data Structures & Algorithms in Python - Stacks, Queues, Linked Lists

07-Sep-2025: Data Structures & Algorithms in Python - Trees and Graphs

09-Sep-2025: Data Structures & Algorithms in Python - Searching and Sorting

11-Sep-2025: Data Structures & Algorithms in Python - Recursion

13-Sep-2025: Data Structures & Algorithms in Python - Time and Space Complexity

15-Sep-2025: Database Management - SQL Basics

17-Sep-2025: Database Management - MySQL/PostgreSQL

19-Sep-2025: Database Management - CRUD Operations

21-Sep-2025: Database Management - Joins and Indexes

23-Sep-2025: Database Management - ORM with SQLAlchemy

25-Sep-2025: Database Management - MongoDB (NoSQL Basics)

27-Sep-2025: Web Development (Frontend Basics) - HTML5

29-Sep-2025: Web Development (Frontend Basics) - CSS3

01-Oct-2025: Web Development (Frontend Basics) - JavaScript Basics

03-Oct-2025: Web Development (Frontend Basics) - Bootstrap

05-Oct-2025: Web Development (Frontend Basics) - Responsive Design

07-Oct-2025: Flask Framework (Backend) - Routing and Views

09-Oct-2025: Flask Framework (Backend) - Templates (Jinja2)

11-Oct-2025: Flask Framework (Backend) - Forms Handling

13-Oct-2025: Flask Framework (Backend) - Sessions & Cookies

15-Oct-2025: Flask Framework (Backend) - REST APIs with Flask

17-Oct-2025: Flask Framework (Backend) - Blueprints

19-Oct-2025: Flask Framework (Backend) - Error Handling

21-Oct-2025: Flask Framework (Backend) - Flask Extensions

23-Oct-2025: Django Framework (Optional/Advanced) - MVC/MVT Architecture

25-Oct-2025: Django Framework (Optional/Advanced) - Django ORM

27-Oct-2025: Django Framework (Optional/Advanced) - Admin Interface

29-Oct-2025: Django Framework (Optional/Advanced) - Authentication

31-Oct-2025: Django Framework (Optional/Advanced) - Middlewares

02-Nov-2025: Django Framework (Optional/Advanced) - Django REST Framework

04-Nov-2025: APIs and JSON - RESTful API Design

06-Nov-2025: APIs and JSON - Consuming APIs

08-Nov-2025: APIs and JSON - JSON Handling

10-Nov-2025: APIs and JSON - Postman Testing

12-Nov-2025: Version Control & GitHub - Git Basics

14-Nov-2025: Version Control & GitHub - Branching and Merging

16-Nov-2025: Version Control & GitHub - GitHub Workflow

18-Nov-2025: Version Control & GitHub - Pull Requests

20-Nov-2025: Version Control & GitHub - Collaborative Development

22-Nov-2025: Deployment and DevOps Basics - Virtual Environments

24-Nov-2025: Deployment and DevOps Basics - Gunicorn & WSGI

26-Nov-2025: Deployment and DevOps Basics - Docker Basics

28-Nov-2025: Deployment and DevOps Basics - CI/CD Overview

30-Nov-2025: Deployment and DevOps Basics - Deployment to Heroku/Vercel/Render

02-Dec-2025: Deployment and DevOps Basics - Nginx Basics

04-Dec-2025: Deployment and DevOps Basics - Hosting Static Files

06-Dec-2025: Project Development - Planning a Full Stack Project

08-Dec-2025: Project Development - Frontend Integration with Backend

10-Dec-2025: Project Development - CRUD Application

12-Dec-2025: Project Development - Authentication System

14-Dec-2025: Project Development - Mini Projects and Capstone Project