

Full Stack Python Course Content

1. Python Fundamentals (Hands on)
2. Web Fundamentals (Hands on)
3. Frontend Framework
4. Database Management (Hands on)
5. Django Framework (Hands on)
6. Django REST Framework (Hands on)
7. Flask and FastAPI
8. Testing and Security
9. Deployment and DevOps Basics
10. Capstone Projects

Python Fundamentals (Hands on)

- Syntax, Data Types, Control Flow, Functions
- OOP, Modules, Exception Handling, File Handling
- Virtual Environments, pip, Git and GitHub

Web Fundamentals (Hands on)

- HTML5, CSS3, Flexbox, Grid, Responsive Design
- JavaScript ES6+, DOM Manipulation, Fetch API
- Bootstrap or Tailwind CSS

Frontend Framework

- React Fundamentals: Components, Props, State, Hooks
- Routing, Forms, API Integration

Database Management (Hands on)

- SQL, PostgreSQL, MySQL, Joins, Indexing
- MongoDB Basics
- ORM Concepts

Django Framework (Hands on)

- MVT Architecture, Models, Views, Templates
- Django ORM, Admin Panel, Forms, Authentication
- Class-Based Views, Middleware, Signals

Django REST Framework (Hands on)

- Serializers, ViewSets, Routers
- JWT and Token Authentication, Permissions
- Pagination, Filtering, API Documentation with Swagger

Flask and FastAPI

- Flask Routing, Blueprints, SQLAlchemy
- FastAPI Basics, Async APIs, Pydantic

Testing and Security

- Unit Testing with PyTest, API Testing with Postman
- OWASP Top 10, CORS, CSRF, Input Validation

Deployment and DevOps Basics

- Docker, Nginx, Gunicorn
- CI/CD with GitHub Actions
- Deployment on AWS, Render, or Heroku

Capstone Projects

- E-Commerce, Blog, Job Portal, or Dashboard Application
- Portfolio and Interview Preparation