

Python & Django Training Syllabus

Provided by CorporateSpace.in

Master Web Development with Python & Django

Duration: 25–30 Hours

Last Updated: August 2025

<https://corporatespace.in/python-django-training>

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1 Training Overview

The Python & Django Training for Professionals, offered by CorporateSpace.in, is designed to master web development through hands-on, project-based learning. This program equips participants with the skills to build robust web applications and APIs using Python and the Django framework, with a focus on real-world applications in fintech, edtech, and SaaS industries. Participants will develop a real-time project (e.g., Job Portal or CRM system) and gain expertise in deployment, database integration, and REST API development. The training is delivered by an Assistant Professor and Full-Stack Developer with over 6 years of experience, ensuring career growth and measurable outcomes.

1.1 Training Objectives

- Master core Python programming and Django framework for web development.
- Build and deploy a functional web application (e.g., Job Portal or CRM).
- Learn REST API development with Django REST Framework.
- Gain proficiency in database integration (MySQL/PostgreSQL) and cloud deployment (Heroku/AWS).
- Enhance career prospects with resume-building and project-based certification.

1.2 Training Duration

- Total: 25–30 hours.
- Format: Live, hands-on coding, and assignments (onsite, online, or hybrid).
- Schedule: Flexible, with weekend batches available for corporate teams.

1.3 Target Audience

- Software Engineers seeking backend development expertise.
- Professionals transitioning from PHP/JavaScript to Python.
- College Students (BCA, MCA, BE) targeting web development projects.
- Startups and Founders building Django-based Minimum Viable Products (MVPs).

1.4 Prerequisites

- Basic programming knowledge (recommended but not mandatory).
- Familiarity with web development concepts (e.g., HTML, CSS) is helpful.
- Access to a laptop with VS Code, Python, and MySQL/PostgreSQL installed.

2 Training Agenda

2.1 Course Modules

- **Module 1:** Introduction to Python and Setup (3–4 hours)
- **Module 2:** Core Python Programming (5–6 hours)

- **Module 3:** Introduction to Web Development with Flask (3–4 hours)
- **Module 4:** Django Fundamentals (5–6 hours)
- **Module 5:** Advanced Django Features (5–6 hours)
- **Module 6:** REST API Development with Django REST Framework (3–4 hours)
- **Module 7:** Real-Time Project: Job Portal or CRM System (4–5 hours)
- **Module 8:** Deployment and Wrap-Up (2–3 hours)

3 Module 1: Introduction to Python and Setup (3–4 Hours)

3.1 Setup and Tools

- Installing Python, VS Code, and necessary libraries.
- Configuring Git and GitHub for version control.
- Setting up MySQL/PostgreSQL and Postman for API testing.

3.2 Why Python and Django?

- Overview of Python's role in web development, automation, and data science.
- Benefits of Django: Security, ORM, and rapid development.
- Real-world use cases (e.g., Instagram, Pinterest).

4 Module 2: Core Python Programming (5–6 Hours)

4.1 Python Basics

- Variables, data types, and control structures.
- Functions and modular programming.
- Exception handling and file I/O.

4.2 Object-Oriented Programming (OOP)

- Classes, objects, and inheritance.
- Encapsulation and polymorphism.
- Practical exercises: Building reusable Python modules.

4.3 Lab: Python Exercises

- Coding exercises on functions, OOP, and file handling.
- Mini-project: File-based data processing script.

5 Module 3: Introduction to Web Development with Flask (3–4 Hours)

5.1 Flask Fundamentals

- Setting up a Flask application.
- Routing, templates, and static files.
- Basic database integration with SQLAlchemy.

5.2 Lab: Flask Mini-Project

- Building a simple web app with Flask (e.g., To-Do List).
- Testing routes and templates.

6 Module 4: Django Fundamentals (5–6 Hours)

6.1 Django Basics

- Django project structure and setup.
- Models, Views, and Templates (MVT architecture).
- Django Admin interface customization.

6.2 Database Integration

- Configuring MySQL/PostgreSQL with Django ORM.
- Creating and managing database migrations.
- Querying data with Django Models.

6.3 Lab: Django Setup

- Setting up a Django project.
- Creating models and admin interfaces for a sample app.

7 Module 5: Advanced Django Features (5–6 Hours)

7.1 Authentication and Forms

- Implementing user authentication (login, logout, registration).
- Building and validating Django Forms.
- Customizing user permissions and roles.

7.2 Templates and Static Files

- Designing dynamic templates with Django Template Language.
- Managing CSS, JavaScript, and static assets.

7.3 Lab: Authentication and Forms

- Building a login system with Django authentication.
- Creating a form-based data entry system.

8 Module 6: REST API Development with Django REST Framework (3–4 Hours)

8.1 API Fundamentals

- Introduction to RESTful APIs and Django REST Framework.
- Serializers, views, and URL routing for APIs.
- Authentication and permissions for APIs.

8.2 Lab: Building a REST API

- Creating CRUD APIs for a sample application.
- Testing APIs with Postman.

9 Module 7: Real-Time Project: Job Portal or CRM System (4–5 Hours)

9.1 Project Development

- Planning and designing a Job Portal or CRM system.
- Implementing CRUD operations, authentication, and admin features.
- Integrating MySQL/PostgreSQL for data storage.

9.2 Lab: Project Implementation

- Coding the project with instructor guidance.
- Testing and debugging the application.

10 Module 8: Deployment and Wrap-Up (2–3 Hours)

10.1 Cloud Deployment

- Deploying Django apps on Heroku or AWS.
- Configuring environment variables and databases.
- Best practices for production deployment.

10.2 Lab: Deployment

- Deploying the Job Portal/CRM project to Heroku.
- Testing the deployed application.

10.3 Wrap-Up

- Recap of key concepts and project deliverables.
- Resume-building with Django project highlights.
- Certificate of Completion distribution.

11 Training Materials and Resources

11.1 Provided Materials

- Course deck with slides and code snippets (accessible via QR code).
- Project codebase hosted on GitHub.
- Sample project templates and datasets.

11.2 Tools and Platforms

- Python, Django, Django REST Framework.
- VS Code, GitHub, Postman.
- MySQL/PostgreSQL for database management.
- Heroku/AWS for cloud deployment.

12 Delivery Options

- **Onsite Training:** At your company premises (India-wide).
- **Online Live Sessions:** Via Zoom or Google Meet.
- **Hybrid Format:** Weekend batches for corporate teams.
- **Customization:** Tailored modules and schedules for corporate needs.

13 Instructor Profile

Pratibha Rajawat

Assistant Professor | Full-Stack Developer | Founder, CorporateSpace.in

With over 6 years of experience, Pratibha Rajawat is a passionate full-stack developer and corporate trainer. She has trained 1200+ professionals across 15+ corporate clients, delivering hands-on, project-based training in Python, Django, and other web technologies. Her bilingual (Hindi + English) approach ensures accessibility, with a focus on real-world applications and measurable skill improvement (avg. 72% ROI within 3 months).

14 Bonus Add-Ons

- Resume-building guidance with Django project highlights.
- Access to project codebase on GitHub.
- Certificate of Completion for all participants.

- 30 days of post-training doubt-solving and code support.
- Job and internship references (on request).

15 Frequently Asked Questions (FAQ)

15.1 Do I need prior coding experience?

- Basic programming knowledge is recommended but not mandatory. The course caters to all levels with beginner-friendly modules.

15.2 Will we build a real project in the course?

- Yes, participants will build a Job Portal or CRM system with CRUD, login, and admin features.

15.3 Will I get help after the course ends?

- Yes, 30 days of doubt-solving and code support are provided post-training.

15.4 Can I customize the training for my company team?

- Absolutely, CorporateSpace.in offers custom modules and flexible scheduling for corporate needs.

16 Contact Information

Prepared by CorporateSpace.in

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For inquiries: <https://corporatespace.in/python-django-training>