

Syllabus - Full stack Python development

Program Highlights

- Learn tools and techniques used in industry: Git, cloud hosting, coding standards, and best practises followed by the industry.
- Industry-experienced faculties
- Covers every aspect of application development—UI, database, and backend development
- Learn by doing: assignments for practising
- Step-by-step approach: students develop a part of the project while learning each technology.

Industry Project

At the end of the course, all the students will have completed an Ecommerce application hosted on a cloud server. Students will individually do an industry standard project along with the course. The features of Ecommerce project will be:

- Administrators can manage the whole application, approve/block resellers, remove customers if required, etc.
- Registration for customers and resellers.
- Login for customers and resellers
- Change your password with OTP verification.
- Update profile
- Resellers can add, modify, or delete products.
- Customers can search for products using different criteria, such as the name of the product, category, etc.
- The customer can buy or return the product.
- Resellers and admin will be able to pull different types of reports.

Students will be able to work with companies that develop applications like:

- ERP application
- Accounting software
- Social media applications
- Hotel booking application
- Train, bus, flight booking application or ticket reservation
- job portals

- E-commerce
- Matrimony application
- Management System
- Hospital Information System
- College/School management system
- Doctor Booking
- Retail shop management
- Library Management System
- Internet banking
- Photo/Video sharing platforms
- Software for video conferencing
- Content management system
- And there are many more...
- Students can also opt for job roles in:
- Digital marketing, web development, game development, and so on.

Designations

- Junior Software Engineer
- Software Engineer
- Full stack developer
- Web Developer
- Back end developer
- Junior Python developer
- UI/UX developer
- Front end developer

Certification

Certification by Oray Education, London UK

Course Overview

The goal of the CS diploma in Python full stack development is to transform you into a professional web application developer. Python is chosen over other languages because of its simple text and strong libraries, and our expert team trainers always focus on real-time and skill development sections.

You will receive real-time project experience with industry professionals along this course. We provide live-instructor-led training to help you in grasping Python and Angular programming concepts. You will be able to do an application for Ecommerce hosted in a cloud server. You'll come to understand coding logic using popular languages and frameworks like Python, JavaScript, Typescript, Angular and Django while learning how to think like a programmer by building software from the ground up. Your entry into your first Junior Web Developer career will be facilitated by our web development bootcamp, which will offer you mentorship, a data-driven curriculum, and an excellent learning environment.

Programme Structure

Sprint 1: Creating a Website

Designing websites using HTML: Basic HTML tag and its usage, HTML tables, lists, and links, HTML forms.
Hosting the website: Hosting websites using FTP client.

Sprint 2: Create your Django project.

Setting up virtual environment: installing a virtual environment, installing packages, and installing the Django framework on a virtual environment

Introduction to Django: Creating projects in Django, Django configurations, adding templates, writing views, running Django projects, working with Django, and REST API

Git-version control: creating GitHub repositories, pushing and pulling, cloning

Website deployment: CI and CD, configuring Django projects for deployment, Heroku cloud server,

Connecting Git and Heroku, Hosting a Django application on Heroku

Test-driven development (TDD): concept of TDD, writing TDD code for the project, executing test cases, linting.

Sprint 3: Design your website:

CSS: Basic structure of CSS, CSS box model, CSS selectors, methods of applying CSS, pseudo selectors, different style properties, CSS grid layout, designing websites using CSS

Bootstrap: including Bootstrap, the Bootstrap grid system, Designing HTML elements using Bootstrap, Bootstrap forms, Creating a Bootstrap model and drop down menu, Designing web pages using Bootstrap

Sprint 4: JavaScript: Make your web pages interactive:

Programming using Javascript: data types, variables, arrays, loops, decision-making, functions, DOM manipulation using JavaScript, Creating a calculator using JavaScript

JQuery: An Introduction to JQuery, JQuery Selectors, JQuery Events and Effects, Applying JQuery to Web Pages

Jquery AJAX: JSON parsing in JavaScript

Sprint 5: Design the Database:

DBMS and the relational database model, PostgreSQL, Keys, Applying DDL and DML commands, functions, joins, and subqueries, Designing a database for a project

Sprint 6: Python programming:

Basic programming: variables, data types (number, string, list, tuple, set, dictionary), comments, decision-making, looping, functions, modules, and exception handling.

Object-oriented programming in Python: abstraction, encapsulation, inheritance, and polymorphism

JSON parsing in Python; logging in Python.

Sprint 7: Django:

Introduction to Django, MVT architecture, framework, Django ORM, writing ORM queries (inserts, selects, updates, deletes, joins, etc.), CRUD operations in Django, Get, post, sessions, and cookies; REST API; TDD, CI/CD; OTP verification; payment gateway integration