COURSE SYLLABUS

# Python Web Development with Django

Learn Django, a Python web framework, for developing web applications. Gain experience with URL dispatchers, querying models, and automating tasks with Django. Then, explore Django REST, another Django framework, to work with images, authentication, and API endpoints.

For more information, visit
https://www.creativelive.com/classes/python-django-development



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# Course Outline

## Intro to Python

### Introduction to Python

- Variables
- Numeric Data Types: Int & Float
- Sequential Types: Str & List
- If-Elif-Else Statements
- Creating Python Scripts/Files
- Definite loops: For loops
- Indexing
- Slicing

### Advanced Data Types in Python

- Data Types: tuples
- Dictionaries
- Reading and Writing txt and csv files

### Writing Iterative Code and Algorithms

- Indefinite loops: while loops
- Runtime complexity
- Searching and sorting algorithms
- Custom functions in Python
- Args and Kwargs
- Importing files

## Object Oriented Programming with Python

### Introduction to Object Oriented Programming

- Classes
- Methods
- Inheritance
- Abstract Classes

### Working with APIs

- RESTful architecture
- Working with APIs
- Request library

### Introduction to Developer Tools and SQL

- Assert statements
- Testing
- Git
- Intro to SQL
- CRUD

## Introduction to Django

### Introduction to Back-End Web Development using Django

- HTTP protocol
- MVC model
- Virtual environment
- Django structure
- Generic Views
- HTML templates
- URL dispatcher

### Advanced Django for Web and Automation

- Custom Views
- GET and POST methods
- URL shortener
- User model
- Logic in templates
- Querying models
- Serving Staticfiles
- Deployment of Django
- Automating tasks with Django

## Django REST

### Building Web APIs using Django REST

- Generic Views in Django Rest
- Serializers
- JSON

- Building RESTful APIs
- Filtering Models
- Working with Images
- Authentication with tokens
- Postman
- Related models
- Contenttypes app

### Deploying Web APIs

- Using API endpoints
- Deployment of Django REST project

## Capstone Project and Career Support

### Final Project and Presentation

- Concept presentation
- Approval by committee
- Working on the project
- Intermediate report to committee
- Finishing the project

### Preparing to enter the job market

- Resume review and mock interviews
- Understanding the job market
- How to identify the right company for you
- Final presentation of working project