

# Django

## Course Contents:

**Duration:** 45 Days

### **Introduction to Django**

- Introduction
- About Django
- Django Components
- Installing & Configuring Django Components
- Django Pre-Requisites
- Downloading & Installing Django
- Choosing a Database
- Creating a New Project

### **Module 2: Generating Simple Django Views**

- Generating Simple Django Views
- About View Functions
- Using Django's HttpResponse Class
- Understanding HttpRequest Objects
- Using QueryDict Objects

### **Module 3: Configuring URLconf's**

- Configuring URLconf's
- About URLconf
- Regular Expressions
- Expression Examples
- Simple URLConf Examples
- Using Multiple URLConf's
- Passing URL Arguments

### **Module 4: Django Templates**

- About Templates
- Template Fundamentals
- Creating Template Objects
- Loading Template Files
- Filling in Template Content (Context Objects)
- Template Filters □ Template Tags
- More on For Loops
- Template Inheritance
- Easy Rendering of Templates

- RequestContext Processors
- Global Context Processors

## **Module 5: Forms**

- Getting Data From the Request Object
- A Simple Form-Handling Example
- Making a Contact Form
- Tying Form Objects Into Views

## **Module 6: Database Models with Django**

- About Database Models
- Configuring Django for Database Access
- Understanding Django Apps
- About Django Models
- Defining Django Models
- Understanding Model Fields & Options
- Table Naming Conventions
- Creating A Django Model
- Adding the App to Your Project
- Validating the App
- Generating & Reviewing the SQL
- Adding Data to the Model
- Primary Keys and the Model
- Simple Data Retrieval Using a Model
- Understanding QuerySets
- Applying Filters
- Specifying Field Lookups
- Lookup Types
- Slicing QuerySets
- Specifying Ordering in QuerySets
- Common QuerySet Methods
- Deleting Records
- Managing Related Records
- Retrieving Related Records
- Using Q Objects
- Creating Forms from Models

## **Module 7: Using the Django Admin Interface**

- Using the Django Admin Interface
- Enabling the Admin Interface
- Creating an Admin User

## **Module 8: Access Control with Sessions and Users**

- Access Control with Sessions and Users
- Cookies & Django
- The Django Session Framework
- Sessions in Views
- Session Tuning

- Installing Django User Authentication
- Using Authentication in Views
- Login and Logout
- Building your Own Login/Logout Views
- Authentication Decorators
- Adding & Deactivating Users □ Asynchronous Messaging
- Managing Permissions

## **Module 9: Generic Views**

- Simple Generic Views
- Using Generic Redirects
- Other Generic Views
- Create/Update/Delete Generic views

## **Module 10: Deploying Django Applications**

- Deploying Django Applications