

GANPAT UNIVERSITY									
FACULTY OF ENGINEERING & TECHNOLOGY									
Programme	Bachelor of Technology				Branch/Spec	Computer Science & Engineering			
Semester	V				Version	1.0.0.0			
Effective from Academic Year	2024-25				Effective for the batch Admitted in	2022			
Subject code	2CSE50E29		Subject Name	Web Development using Python					
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture (DT)		Practical (Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3	0	1	0	4	Theory	40	60	100
Hours	3	0	2	0	5	Practical	30	20	50
Pre-requisites:									
Knowledge of C/C++ Programming , Database, HTML, CSS, JavaScript,Python									
Learning Outcome:									
After completion of the course, student will be able to,									
<ul style="list-style-type: none"> • Understand the basics of C# .Net • Design the web application using ASP.Net server controls and AP.Net MVC • Access the data using ADO.Net and ASP.Net • Develop web applications using JQuery and AJAX 									
Theory syllabus									
Unit	Content								Hrs
1	Introduction to Django What is Web framework -The MVT Design Pattern-The MVT Design Pattern- Django's History. Installation of Django: Installing Python- Installing Django-Setting up a Database - Starting a Project- the Development Server- Django Commands Overview								06
2	Dynamic Web Pages and Django Template System Dynamic Content- Mapping URLs to Views- URL configurations and Loose Coupling, Django Forms,404 Errors- Dynamic URLs- Django Template System Basics- Creating Template Objects- Rendering a Template- Rendering a Template- Playing with Context Objects.								08
3	Django Models The MVT Development Pattern- Configuring Django for Database Access - Understanding Django Apps - Defining Models in Python- Installing the Model -Understanding Model Fields & Options - Creating A Django Model -Adding Model String Representations-Making Changes to a Database Schema								08
4	Django Admin Interface Activating the Admin Interface- Using the Admin Interface - Users, Groups and Permissions Customizing the Admin Interface's Look and Feel- Customizing the Admin Index Page- When and Why to Use the Admin Interface- Form Processing- Form Validation- Save Form Response								08

5	QuerySets and Static Files QuerySet Introduction,Queryset Get, Queryset Filter, QuerySet Order By, Loading css files into templates,Loading js files into templates,Uploading image using models,User authentication	05
6	Access Control with Session And Users 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- Adding & Deactivating Users- Asynchronous Messaging- Managing Permissions	05
7	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	05

Practical content

Practicals are based on topics like Django Template, Django Form, Crud operation in Django, Access control in Django

Text Books :

1	Django for Beginners: Build websites with Python and Django by William S. Vincent
2	Web Development with Django by Ben Shaw, Saurabh Badhwar, Chris Guest, Bharath Chandra K S

Reference Books :

1	Django for APIs: Build web APIs with Python and Django by William S. Vincent
2	Django 4 By Example by Antonio Mele

Course Outcomes:

COs	Description
CO1	Django Models to build an interface with powerful relational databases in real time
CO2	Design and develop forms and automate the validation and verification of data in those forms
CO3	User authentication and access control using Django sessions
CO4	Apply the Concept to a real-world problem to implement, maintain, and manage web application.

Mapping of CO and PO:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	2	3	2	2	0	0	3	1	2	1
CO2	3	1	1	2	2	1	0	0	2	1	2	1
CO3	2	2	0	1	2	1	0	0	2	2	2	1
CO4	3	3	1	3	2	2	0	0	3	2	2	1

