SARVAJANIK UNIVERSITY
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SARVAJANIK UNIVERSITY
Sarvajanik College of Engineering and Technology
Bachelor of Technology

Year: B. Tech II (Semester IV)

Subject Name: Web Framework **Subject Code:** BTCO19425
Type of course: Honors (Group: Full Stack Developer)
Prerequisite (if any): Basic knowledge of Internet, Python programming

Rationale: Today's world is driven by Internet based applications. The rationale behind this course is to impart the knowledge of web programming among students of computer engineering. This course covers web programming for both client-side and server-side to develop complete web based applications using web framework.

Teaching and Examination Scheme:

Teaching Scheme				Theory Marks			Practical Marks		Total
L	T	P	C	TEE	CA1	CA2	TEP	CA3	
4	0	2	5	60	25	15	30	20	150

CA1: Continuous Assessment (assignments/projects/open book tests/closed book tests) CA2: Sincerity in attending classes/class tests/ timely submissions of assignments/self-learning attitude/solving advanced problems TEE: Term End Examination TEP: Term End Practical Exam (Performance and viva on practical skills learned in course) CA3: Regular submission of Lab work/Quality of work submitted/Active participation in lab sessions/viva on practical skills learned in course

Content:

Sr. No.	Content	Total Hrs
1	**Introduction to Front End** HTML Tags, CSS syntax, Responsive design, Bootstrap introduction, Java script syntax, Java script inbuilt objects, Error handling and event handling, DOM, Asynchronous Programming, JSON, jquery	15
2	**Introduction to Angular** Overview, Components,Modules ,Templates,Directives,Dependency Injection	12
3	**Angular - Routing and Navigation** Overview , Common Routing Tasks , Routing in SPA , Creating custom route matches	04
4	**Angular - Forms** Reactive Forms, Validate Form Input, Buliding Dynamic Forms	04
5	**Introduction to Django** Features of Django, Django web server,Understanding Django environment, The MTV Development Pattern	05

6	**Back-End Web Development using Django** Installation of Django, The Basics of Dynamic Web Pages, The Django Template System, The Django Template System	15
7	**Application Development using Framework**	05

Suggested Specification table with Marks (Theory): (For B.Tech only)

Distribution of Theory Marks					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
10	25	25	0	0	0

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

Sr No	Title of book /article	Author(s)	Publisher and details like ISBN	Year of publication	Publication Edition
1	Angular in Action	Jeremy Wilken	Manning Publication-9781617293313	March-2018	
2	Angular - The Complete Guide	Maximilian Schwarzmuller	Packt Publishing-9781788998437	January-2021	
3	Learning Angular	Christoffer Noring , Pablo Deeleman	Packt- 978-1787124929		Second Edition
4	Django for Beginners	William S. Vincent	Welcome To Code-	February-2018	

5	Web Programming with HTML5, CSS, and JavaScript	John Dean	Jones & Bartlett Learning	January 2018	

Course Outcomes:

Sr. No.	CO statements	Marks % weightage
CO-1	Learn the concepts of client side programming using CSS and Java Script	20
CO-2	Understand the concepts of Angular to extend basic HTML features	20
CO-3	Creating and validating Angular Forms.	20
CO-4	Understand the architecture of Django based website.	20
CO-5	Create Django templates for easy to modify views.	20

List of Open learning website:

1. https://angular.io/
2. https://www.djangoproject.com/
3. https://www.w3schools.com/nodejs/
4. https://www.tutorialspoint.com/nodejs/index.htm
5. https://www.javatpoint.com/nodejs-tutorial
6. https://www.tutorialsteacher.com/angular
7. https://www.w3schools.com/angular/

For Lab Sessions:

Visual Studio Code
Java Script Library

List of Experiments:

Sr. No	Practical
8.	Develop a simple web page using the latest HTML5 and CSS3

9.	Demonstrate DOM, how to manipulate DOM with Javascript
10.	Demonstrate validation of various inputs using Javascript.
11.	Create single page website using Angular
12.	Create login application using concept of routing.
13.	Display data from covid api using http service
14.	Create Sign up application using Django.
15.	Implement Shopping cart application.