School of Computer Science and Engineering
Dept. of. Computer Science and Engineering
COURSE PLAN
Academic Year 2025-26 ODD SEMESTER

School/Department of Students	**SOCSE**
Name of the Program(s) of Students	**B.Tech-Computer Science and Engineering (CAI,CCS,CIT,COM/CEI,CSD,CSG/CST,CSI,CSN)**
PRC Approval Ref. No.	**PU/AC-24.05/SOCSE04/SoCSE/2024-2028**
Semester/Year	**III/II**
Course Code & Name	**WEB TECHNOLOGIES LAB– CSE2259**
Credit Structure (L-T-P-C)	**0-0-2-1**
Contact Hours	**30**
Course In-Charge (IC)	**Ms.Pushpalatha, Mr. Muthuraju, Dr. Jayanthi Kamalasekaran**
Course Instructor(s)	**Dr. Anandaraj S P, Dr. Gopal Krishna Shyam, Dr. Ramesh T, Ms.Impa B H, Mr. Jerrin Joe Francis, Ms Pushpalatha M, Ms. Soumya, Mr. Sunil Kumar Sahoo, . Dr. Jayanthi Kamalasekaran, Ms. Sandhya L, Mr. Muthuraju V, Mr. Likhith S R, Ms. Alina Raheen, Ms. Sharon, Mr. Santhosh Kumar K L, Dr. Debasmitha Mishra, Ms. Shwetha K H, Ms. Poonam Yadav, Ms. Sushmitha S S, Mr. Bikram Sarkar, Ms. Pushpalatha M (NF), Mr Vivek Bongale, Mr. Sakthivel E, Ms. Amreen Khanum D, Ms. Josephine, Dr. Taranath N L, Ms. Rohini A, Mr. Lakshmisha, Mr. Tamil Selvan, Ms. Prachi Amol Gadhikar, Mr. Ranjan Ghosh, Mr. Kirubakaran**
Course URL	**https://presidencyuniversity.linways.com**

1. **COURSE PRE-REQUISITES:**
NIL

2. **COURSE DESCRIPTION:**
This course highlights the comprehensive introduction to scripting languages that are used for creating web-based applications hands-on experiments are conducted in laboratory that provides an opportunity to implement the concepts and enhance critical thinking and analytical skills.

3. COURSE OBJECTIVES:
The objective of the course is to familiarize the learners with the concepts of **Web Technologieslab** and attain **Skill Development** through **Experiential Learning techniques**

4. COURSE OUTCOMES:

TABLE 1: COURSE OUTCOMES		
CO Number	**Statement of CO**	**Blooms Cognitive Level**
	On successful completion of the course the students shall be able to	
CO1	Implement web-based application using client-side scripting languages.	Apply
CO2	Apply various constructs to enhance the appearance of a website.	Apply
CO3	Apply server-side scripting languages to develop a web page linked to a database.	Apply

5. MAPPING OF COURSE OUTCOMES WITH PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

5.1 *PROGRAM OUTCOMES*:

On successful completion of the Program, the students will be able to:

PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent

responsibilities relevant to the professional engineering practice.

PO7.   Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8.   Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9.   Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10.   Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports anddesign documentation, make effective presentations, and give and receive clear instructions.

PO11.   Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12.   Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

TABLE 2a: CO-PO Mapping											
CO. No	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	H	M	M	-	M	-	-	-	-	-	-	L
CO2	H	M	M	-	M	-	-	-	-	-	-	L
CO3	H	M	M	-	M	-	-	-	-	-	-	L

5.2 PROGRAM SPECIFIC OUTCOMES:

On successful completion of the Program, the students will be able to:

PSO1	Problem Analysis: Identify, formulate, research literature, and analyze complex engineering problems related to Software Engineering principles and practices, Programming and Computing technologies reaching substantiated conclusions using first principle
PSO2	Design/development of Solutions:Design solutions for complex engineering problems related to Software Engineering principles and practices, Programming and Computing technologies and design system components or processes that meet the specified needs
PSO3	Modern Tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities related to Software Engineering principles and practices, Programme.

<table>
<tr><th colspan="4">TABLE 2b: CO-PSO Mapping</th></tr>
<tr><th>CO Number</th><th>PSO1</th><th>PSO2</th><th>PSO3</th></tr>
<tr><td>CO1</td><td>M</td><td>M</td><td>L</td></tr>
<tr><td>CO2</td><td>M</td><td>M</td><td>L</td></tr>
<tr><td>CO3</td><td>M</td><td>H</td><td>M</td></tr>
</table>

TABLE 2b: CO-PSO Mapping			
CO Number	**PSO1**	**PSO2**	**PSO3**
CO1	M	M	L
CO2	M	M	L
CO3	M	H	M

6. COURSE CONTENT:

Module Number	Module Name	Number of Sessions
1	**Lab sheet -1:** Demonstration of basic HTML Tags	2
	Lab sheet -2: Demonstration of various advanced HTML Tags	2
	Lab sheet -3: Design and develop static web pages	2
	Lab sheet -4: Design and develop static web pages with more features.	2
	Lab sheet -5: Design and develop static web pages for an online Book store.	2
2	**Lab sheet -6:** Design a document using XHTML and CSS to create a catalog of items for online shopping.	2
	Lab sheet -7: Design a document using XHTML and CSS to create a catalog	2
	Lab sheet -8: Create and save XML document for students' information and display the same using cascaded style sheet.	2
	Lab sheet -9: Create and save XML document for students' information and display the same using cascaded style sheet.	2
	Lab sheet -10: Installation of XAMPP Server and PHP Basics.	2
3	**Lab sheet -11:** PHPMyadmin database connectivity	2
	Lab sheet -12: PHP+MYSQL Simple Project introduction	2
	Lab sheet -13: PHP+MYSQL Simple Project front end design	2
	Lab sheet -14: PHP+MYSQL Simple Project back end connection	2

REFERENCE MATERIALS:
TextBooks:
  T1: Robert. W. Sebesta, "*Programming the World Wide Web"*, Pearson Education, 9th Edition, 2016.
  T2. Paul Deitel, Harvey Deitel, Abbey Deital,"Internet & World Wide Web How to Program", Fifth Edition, Pearson Education, 2021.
  T3.*CSS Notes for Professionals*, ebook available at https://books.goalkicker.com/CSSBook/ (Retrieved on Jan. 20, 2022)
  T4. Deitel, Deitel, Goldberg,"*Internet & World Wide Web How to Program*", Fifth Edition, Pearson
Education, 2021.

Reference Books:

R1. Randy Connolly, Ricardo Hoar, "Fundamentals of Web Development", Pearson Education India, 1st.Edition.2016.

R2. Jeffrey C. Jackson, "Web Technologies: A Computer Science Perspective", Pearson Education, 1st Edition,2016.

Online Resources

1. W3schools.com

2. Developer.mozilla.org/en-US/docs/Learn

3. docs.microsoft.com

4. informit.com/articles/ The Relationship Between Web 2.0 and Social Networking

5. https://presiuniv.knimbus.com/user#/home

7. DETAILED SCHEDULE OF INSTRUCTION

TABLE 3: LESSON PLAN				
Session Number	**Topic**	**Sub-Topic**	**CO Number**	**Reference**
1.	Introduction to Web technologies lab LO1: Explain the use purpose of web technologies lab LO2: Distinguish between different scripting languages available	Introduction to Web technologies lab LO1: Explain the use purpose of web technologies lab LO2: Distinguish between different scripting languages available	CO1	T1
2.	**Lab Sheet 1:** Write a program to demonstrate the use of basic HTML tags LO1: Explain the basic tags usage LO2: understand the various basic html tags available	**Lab Sheet 1:** Write a program to demonstrate the use of basic HTML tags LO1: Explain the basic tags usage LO2: understand the various basic html tags available	CO1	T1
3.	**Lab Sheet 2:** Write a program to demonstrate the use of advanced HTML tags LO1: Compare basic and advanced tags and their usage. LO2: Understand when to use basic and advanced tags while creating a web	**Lab Sheet 2:** Write a program to demonstrate the use of advanced HTML tags LO1: Compare basic and advanced tags and their usage. LO2: Understand when to use basic and advanced tags while creating a web	CO1	T1

	page.	page.		
4.	**Lab Sheet 3:** Design and develop static web pages LO1: Understand the requirements while creating astatic web page LO2: Implement the creation of a static web page **SDG Goals-4**	**Lab Sheet 3:** Design and develop static web pages LO1: Understand the requirements while creating astatic web page LO2: Implement the creation of a static web page	CO1	T1
5.	**Lab Sheet 4:** Design and develop static web pages with more features by **Collaborative learning** LO1: Understand the requirements while creating astatic web page LO2: Implement the creation of a static web page	**Lab Sheet 4:** Design and develop static web pages with more features by **Collaborative learning** LO1: Understand the requirements while creating astatic web page LO2: Implement the creation of a static web page	CO1	T1
6.	**Lab Sheet 5:** Design and develop static web pages for an online Book store LO1: Explain the requirement of an online book store. LO2: implement the online book store front end design.	**Lab Sheet 5:** Design and develop static web pages for an online Book store LO1: Explain the requirement of an online book store. LO2: implement the online book store front end design.	CO1,CO2	T1
7.	**Lab Sheet 6:** Design a document using XHTML and CSS to create a catalog of items for online shopping. By **Participative learning** LO1: Explain the requirements of an online shopping web site LO2: Implement the online shopping website front end features	**Lab Sheet 6:** Design a document using XHTML and CSS to create a catalog of items for online shopping. By **Participative learning** LO1: Explain the requirements of an online shopping web site LO2: Implement the online shopping website front end features	CO1,CO2	T2, T3
8.	**Lab Sheet 7:** Design a document using XHTML and CSS to create a catalog of items for online	**Lab Sheet 7:** Design a document using XHTML and CSS to create a catalog of items for online	CO1,CO2	T2, T3

	shopping continued. LO1: Explain the requirements of an online shopping web site LO2: Implement the online shopping website front end features **SDG Goals-10**	shopping continued. LO1: Explain the requirements of an online shopping web site LO2: Implement the online shopping website front end features		
9.	**Lab Sheet 8:** Create and save XML document for students' information and display the same using cascaded style sheet. . LO1: explain the need for XML file LO2: Implement XML for storing students' data	**Lab Sheet 8:** Create and save XML document for students' information and display the same using cascaded style sheet. . LO1: explain the need for XML file LO2: Implement XML for storing students' data	CO1,CO2	T2, T3
10.	**Lab Sheet 9:** Create and save XML document for students' information and display the same using cascaded style sheet continued. . LO1: explain the need for XML file LO2: Implement XML for storing students' data.	**Lab Sheet 9:** Create and save XML document for students' information and display the same using cascaded style sheet continued. . LO1: explain the need for XML file LO2: Implement XML for storing students' data.	CO1,CO2	T2, T3
11.	**Lab Sheet 10:** Installation of XAMPP Server and PHP Basics LO1: learn how to install XAMM and PHP on a system LO2: Understand the use of XAMPP server.	**Lab Sheet 10:** Installation of XAMPP Server and PHP Basics LO1: learn how to install XAMM and PHP on a system LO2: Understand the use of XAMPP server.	CO1,CO2,CO3	T1, T3
12.	**Lab Sheet 11:** PHP-MyAdmin database connectivity LO1: Understand how to connect to php server to the client source code	**Lab Sheet 11:** PHP-MyAdmin database connectivity LO1: Understand how to connect to php server to the client source code	CO1,CO2,CO3	T1, T3

	LO2: Implement database connection using php and mysql **SDG Goals-8**	LO2: Implement database connection using php and mysql		
13.	**Lab Sheet 12:** PHP+MYSQL – Project implementation by **Experiential learning** LO1: Understand various application available only with backend connection LO2: Implement connection of backend with front end	**Lab Sheet 12:** PHP+MYSQL – Project implementation by **Experiential learning** LO1: Understand various application available only with backend connection LO2: Implement connection of backend with front end	CO1,CO2,CO3	T1, T3
14.	**Lab Sheet 13:** PHP+MYSQL – Project implementation LO1: Understand various application available only with backend connection LO2: Implement connection of backend with front end	**Lab Sheet 13:** PHP+MYSQL – Project implementation LO1: Understand various application available only with backend connection LO2: Implement connection of backend with front end	CO1,CO2,CO3	T1, T3
15.	**Lab Sheet 14:** PHP+MYSQL – Project implementation LO1: Understand various application available only with backend connection LO2: Implement connection of backend with front end	**Lab Sheet 14:** PHP+MYSQL – Project implementation LO1: Understand various application available only with backend connection LO2: Implement connection of backend with front end	CO1,CO2,CO3	T1, T3

The main pedagogical methods in the course are as follows:
- Collaborative Learning
- Participative Learning
- Experimental Learning

- Self-Learning

TABLE 4: SPECIAL DELIVERY METHOD			
S. No	Session Number	Subtopic (as per lesson plan)	Pedagogical Method
1.	Lab 4	Frames & syntactic difference between HTML &XHTML	Collaborative Learning
2.	Lab 6	Responsive Design	Participative Learning
3.	Lab 13	Accessing MySQL in PHP	Experimental Learning
4.	-	JavaScript,RDBMS,PHP Cookies,HTML5	Self-Learning

8. ASSESSMENT SCHEDULE

TABLE 5: ASSESSMENT SCHEDULE						
Sl. No	Assessment Type	Coverage	CO Number(s)	Duration in Minutes	Marks	Weightage
1.	Lab Continuous Assessment 1	Lab Sheet 1 –5	CO1 & CO2	110	20	20%
2.	Lab Continuous Assessment 2	Lab Sheet 6 - 10	CO3 & CO4	110	20	20%
3.	MidTerm	Lab Sheet 1-10	CO1, CO2, CO3	-	10	10%
4.	Mini Project	Lab Sheet 1-14	CO1, CO2, CO3 & CO4	-	10	10%
5.	Record + Observation	All lab Sheets	CO1, CO2, CO3 & CO4	-	15	15%
6.	End Term	All lab Sheets	CO1, CO2, CO3 & CO4	110	25	25%

9. COURSE CLEARANCE CRITERIA:

This is in accordance with the Academic Regulations of the University and the Program Regulations and Curriculum of the respective program.

10. SAMPLE QUESTIONS:

TABLE 6: SAMPLE QUESTIONS				
Sl. No	Question	Marks	CO Number	Blooms Cognitive Level
1	The Student Welfare department at Presidency University is planning to organize a cultural fest. Cultural events are to be held with Singing, Dance, Skit, Fashion Show etc. Students should register the interesting events. Assist the web page design team to create a registration form for the Fest using appropriate HTML tags. The web page should be having following things: • The top of the page will	10	CO1	**Apply**

	display the Cultural event Banner (including image and text) and other related information. • The Registration page will get the following details from the participants. Participant Name, Branch, section, E-mail id, mobile no, Gender, Events (Dance, Singing etc),etc.			
2	Imagine a student who wants to learn JAVA course through online is enquiring through website. The website collects the details of the student through form whose fields are name of the student, password, age, address, gender (select gender), mobile number, email id, Name of the course (multiple options should be given), submit, reset. Design a static website using appropriate HTML tags which takes the input from student and displays the output as "successfully registered".	10	CO1	**Apply**
3	Demonstrate a tourist agency web page with following specifications using HTML and CSS: •Title should be about tourist agency •Place your tourist agency name and address at the top of the page in large text, text border, text background color and text color in blue. •Middle of the page list out some features about your tourist agency with font styles. •Bottom of the page landmarks and contact details of tourist agency with different color, style. •Add scrolling text with some offer message.	10	CO2	**Apply**
4	Prepare a customer management system for a small business. It should allow employees to add new customers, update existing customer information, view customer details, and delete customers. Tasks: 20 Marks L5 CO3 •Design a database schema to store customer information such as name, email, phone number, and address. •Create forms for adding new customers and updating existing ones. •Display a list of customers with their details, and provide options for editing or deleting each customer. •Implement search functionality to allow users to find customers by name or email.	20	CO3	**Apply**
	Prepare a system for managing a product inventory. It should allow users to add new products, update existing products, view product details, and delete products from the inventory. Tasks: •Design a	20	CO3	**Apply**

database schema for storing product information such as name, description, price, and quantity. •Create PHP scripts to interact with the database for CRUD (Create, Read, Update, Delete) operations. •Implement forms for adding new products and updating existing ones. •Display a list of products with their details, and provide options for editing or deleting each product. Ensure proper error handling and validation for user input.

11. MAPPING WITH SUSTAINABLE DEVELOPMENT GOALS (SDGs):

TABLE 7: SDG MAPPING

S. No	Topic	SDG Number	Justification
1	XHTML elements, hyperlinks, forms	SDG 4 – Quality Education	Teaches students to build inclusive, accessible, and responsive web pages— empowering education and reducing digital divides.
2	CSS layouts, responsive design, XML/XSLT	SDG 10 – Reduced Inequalities	Promotes the development of modern, flexible web interfaces usable across devices, supporting innovation and inclusiveness.
3	PHP scripting, form handling, database access	SDG 8 – Decent Work & Economic Growth	Enables students to build dynamic, secure platforms (e.g., job portals, e-governance sites), fostering entrepreneurship and transparency.

12. CRITERIA FOR COURSE OUTCOME ATTAINMENT CALCULATION:

TABLE 8: Threshold and Target Set for Course Outcomes

Sl. No	C.O. No.	Course Outcomes	Threshold in %	Target in %
1.	CO1	Implement web-based application using markup languages	50%	65%
2.	CO2	Apply various constructs to enhance the appearance of a website.	50%	60%
3.	CO3	Apply server-side scripting languages for web page design and link to a database.	50%	55%

13. SUMMARY:

TABLE 9: SUMMARY OF COURSE SCHEDULE

Sl. No.	Activity	Start date	End date	Total number of Sessions
1.	Program Integration & Over View of the course	11.08.2025	11.08.2025	**01**
2.	**Lab Sheet 1 to 5**	12.08.2025	08.09.2025	**10**
3.	Continuous Assessment 1	08.09.2025	08.09.2025	**NA**
4.	**Lab Sheet 6 to 10**	09.09.2025	04.10.2025	**10**
5.	**MidTerm Assessment**	05.10.2025	10.10.2025	**NA**

6.	Continuous Assessment 2	13.10.2025	13.10.2025	NA
7.	**Lab Sheet 11 to 14**	14.10.2025	27.11.2025	**10**
8.	**End term Assessment**	28.11.2025	28.11.2025	**NA**

CONTACT TIMINGS IN THE CHAMBER FOR DISCUSSION

Students can meet the respective course instructor during the Chamber Consultation Hour to clarify doubts related to the course.

SPECIFIC GUIDELINES TO STUDENTS, IF ANY:

1. Students are instructed to attend classes regularly.
2. Students are instructed to strictly adhere to the assignment deadlines.
3. Students are instructed to actively participate in Collaborative, Participative and Experimental Learning and in any other classroom discussions
4. Students are instructed to maintain running notes for the course.

Name and Signature of the course In-Charge

APPROVAL:

This course has been duly verified and approved by the Departmental Academic Committee (DAC).

Name and Signature of the Chairperson - DAC