



# SRI KRISHNA INSTITUTE OF TECHNOLOGY

(Accredited by NAAC, Approved by A.I.C.T.E. New Delhi, Recognised by Govt. of Karnataka & Affiliated to V.T U., Belgaum)  
#29, Chimney Hills, Hesaraghatta Main Road, Chikkabanavara Post, Bangalore- 560090

## Department of Computer Science and Engineering

Academic Year: 2021-2022	Semester: 6
Course Name: Web Technology and its Application	Course Code: 18CS63
Total Contact hours: 50	Credits:4
SEE Marks: ; CIE: 60:40	Total Marks: 100
Course Plan Author: Prof. SOWMYA C V	Date: 23/3/2023

**Course Prerequisites:** Programming Fundamentals with C

Basic programming skills of any object oriented programming language

Database Management System

**Course Objectives:** Illustrate the Semantic Structure of HTML and CSS

- Compose forms and tables using HTML and CSS
- Design Client-Side programs using JavaScript and Server-Side programs using PHP
- Infer Object Oriented Programming capabilities of PHP
- Examine JavaScript frameworks such as jQuery and Backbone

**Course Outcomes:** Define HTML and CSS syntax and semantics to build web pages. Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.

- Understand the concepts of Construct , visually format tables and forms using HTML using CSS.
- Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.
- List the principles of object oriented development using PHP.
- Illustrate JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features.

CO Number	Course Outcome At the end of the course, student should be able to . . .	Blooms' Level
CO1	Define HTML and CSS syntax and semantics to build web pages. Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.	L2
CO2	Understand the concepts of Construct , visually format tables and forms using HTML using CSS	L3



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CO3	Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.	L4
CO4	List the principles of object oriented development using PHP	L3
CO5	Illustrate JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features.	L3

## Program Outcomes and Program Specific Outcomes

PO, PSO	<p>1.Engineering Knowledge;</p> <p>2.Problem Analysis;</p> <p>3.Design / Development of Solutions;</p> <p>4.Conduct Investigations of Complex Problems;</p> <p>5.Modern Tool Usage;</p> <p>6.The Engineer and Society;</p> <p>7.Environment and Sustainability;</p> <p>8.Ethics;</p> <p>9.Individual and Teamwork;</p> <p>10.Communication;</p> <p>11.Project Management and Finance;</p> <p>12.Life-long Learning;</p> <p>PSO1.:Accomplish The Skills To Design And Develop Computer Applications In Areas Related To Computer And Networking Systems, Artificial Intelligence , Data Processing And Iot Of Varying Complexity</p> <p>PSO2.: Dexterity To Apply Modern Computing Languages And Platforms In Creating Career Paths To Be An Entrepreneur And Relish For Higher Studies.</p> <p>PSO3 :Ability To Use And Enhance Open Ended Programming Environment To Deliver A Quality Product.</p>
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### CO – PO Mapping

Course Outcomes	Program Outcomes														
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	2	1	2		2			2		2		2		2	2
CO2		1		2	2		1			2		1		1	
CO3	2		2		2		1				2	1		2	2
CO4	1		2		2			1		2			2		2
CO5		1	2	1	2			2				2			1

### Course Content (Syllabus)

#### Module 1:

Introduction to HTML, What is HTML and Where did it come from?, HTML Syntax, Semantic Markup, Structure of HTML Documents, Quick Tour of HTML Elements, HTML5 Semantic Structure Elements, Introduction to CSS, What is CSS, CSS Syntax, Location of Styles, Selectors, The Cascade: How Styles Interact, The Box Model, CSS Text Styling.

**Textbook 1: Ch. 2, 3**

**RBT: L1, L2, L3**

#### Module 2:

HTML Tables and Forms, Introducing Tables, Styling Tables, Introducing Forms, Form Control Elements, Table and Form Accessibility, Microformats, Advanced CSS: Layout, Normal Flow, Positioning Elements, Floating Elements, Constructing Multicolumn Layouts, Approaches to CSS Layout, Responsive Design, CSS Frameworks.

**Textbook 1: Ch. 4,5**

**RBT: L1, L2, L3**



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## **Module 3:**

JavaScript: Client-Side Scripting, What is JavaScript and What can it do?, JavaScript Design Principles, Where does JavaScript Go?, Syntax, JavaScript Objects, The Document Object Model (DOM), JavaScript Events, Forms, Introduction to Server-Side Development with PHP, What is Server-Side Development, A Web Server's Responsibilities, Quick Tour of PHP, Program Control, Functions

**Textbook 1: Ch. 6, 8**

**RBT: L1, L2, L3**

## **Module 4:**

PHP Arrays and Superglobals, Arrays, \$\_GET and \$\_POST Superglobal Arrays, \$\_SERVER Array, \$\_FILES Array, Reading/Writing Files, PHP Classes and Objects, Object-Oriented Overview, Classes and Objects in PHP, Object Oriented Design, Error Handling and Validation, What are Errors and Exceptions?, PHP Error Reporting, PHP Error and Exception Handling

**Textbook 1: Ch. 9, 10**

**RBT: L1, L2, L3**

## **Module 5:**

Managing State, The Problem of State in Web Applications, Passing Information via Query Strings, Passing Information via the URL Path, Cookies, Serialization, Session State, HTML5 Web Storage, Caching, Advanced JavaScript and jQuery, JavaScript Pseudo-Classes, jQuery Foundations, AJAX, Asynchronous File Transmission, Animation, Backbone MVC Frameworks, XML Processing and Web Services, XML Processing, JSON, Overview of Web Services.

**Textbook 1: Ch. 13, 15,17**

**RBT: L1, L2, L3**



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## Schedule of Instruction

Sl.no	Class no	Module	Topic	Reference (Book, Page no.)	Course Outcome	Delivery mode	
1		<b>Introduction Module1:</b>				L	
2	1		<b>Module 1: HTML and CSS</b>	T1, 97-101	CO1	L	
			Introduction to HTML, What is HTML and Where did it come from?				
3	2		HTML Syntax	T1, 103	CO1	L	
4	3		Semantic Markup	T1, 106	CO1	L	
5	4		Structure of HTML Documents	T1, 108	CO1	L	
6	5		Quick tour to HTML Elements	T1, 112	CO1	L	
7	6		HTML5 Semantic Structure Elements	T1, 125	CO1	L	
8	7		Introduction to CSS, What is CSS	T1, 139	CO1	L	
9	8		CSS Syntax, Location of Styles,	T1,143-147	CO1	L	
10	9	Selectors	T1, 149	CO1	L		
11	10	<b>Module 2:</b>	How Styles Interact, The BOX Model	T1,160-172	CO1	L	
12	11		Text Styling	T1, 178	CO1	L	
13	12		<b>Module-2 : HTML Tables and Forms and CSS Layout</b>	T1, 192	CO1, CO2	L	
			HTML Tables and Forms, Introducing Tables				
14	13		Styling Tables	T1, 199	CO1, CO2	L	
15	14		Introducing Forms, Form Control Events	T1, 202	CO1, CO2	L	
16	15		Form Control Elements	T1, 207	CO1, CO2	L	
17	16		Table and Form Accessibility,	T1, 218	CO1, CO2	L	
18	17		Microformats, Advanced CSS: Layout	T1, 221	CO1, CO2	L	
19	18		Normal flow	T1, 229	CO1, CO2	L	
20	19		Positioning Elements	T1, 232	CO1, CO2	L	
21	20	Floating Elements	T1, 237	CO2	L		



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22	21	<b>Module 3:</b>	Constructing Multicolumn Layouts	T1, 247	CO2	L	
23	22		Approaches to CSS Layout	T1, 253	CO2	L	
24	23		Responsive Design, CSS Frameworks	T1, 258	CO2	L	
25	24		<b>Module-3: Client-Side &amp; Sever Scripting</b>	T1, 274	CO3	L	
			JavaScript: Client-Side Scripting				
26	25		What is JavaScript and What can it do?	T1, 275	CO3	L	
27	26		JavaScript Design Principles, Where does JavaScript Go?,	T1, 284	CO3	L	
28	27		Syntax, JavaScript Objects,	T1, 295-301	CO3	L	
29	28		The Document Object Model (DOM)	T1, 305	CO3	L	
30	29		JavaScript Events, Forms	T1, 312-320	CO3	L	
31	30	<b>Module 4:</b>	Introduction to Server-Side Development with PHP, What is Server side development	T1, 366-367	CO3	L	
32	31		Web Server's Responsibilities,	T1, 372	CO3	L	
33	32		Quick Tour of PHP	T1, 380	CO3	L	
34	33		Program Control , Functions	T1, 390-395	CO3	L	
35	34		<b>Module-4: PHP Arrays and exception Handling.</b>	T1, 408	CO4	L	
			PHP Arrays and Super globals				
36	35		Arrays, \$_GET and \$_POST Super global Arrays,	T1, 418	CO4	L	
37	36		\$_SERVER Array,	T1, 426	CO4	L	
38	37		\$_Files Array	T1, 429	CO4	L	
39	38		Reading/Writing Files,	T1, 436	CO4	L	
40	39		PHP Classes and Objects	T1, 446	CO4	L	
41	40		<b>Module 5:</b>	Object-Oriented Overview, Classes and Objects in PHP	T1, 447-451	CO4	L
42	41			Object Oriented Design	T1, 459	CO4	L
43	42			Error Handling and Validation, What are errors and Exceptions, PHP Error Reporting	T1, 547	CO4	L
44	43	PHP Error and Exception Handling		T1, 553	CO4	L	



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45	44		<b>Module-5: Managing State and Advanced</b>	T1, 585	CO5	L	
			Managing State, The Problem of State in Web Applications				
46	45		Session state, HTML Web storage, Caching	T1, 598-605	CO5	L	
47	46		Advanced JavaScript and jQuery, AJAX, CORS	T1, 657-677	CO5	L	
48	47		Asynchronous File Transmission, Animation, Backbone MVC Frameworks	T1, 688-698	CO5	L	
49	48		XML Processing and Web Services	T1, 762	CO5	L	
50	49		JSON	T1, 778	CO5	L	
	50	Overview of Web Services	T1, 781	CO5	L		

\*L – Lecture, V- Videos or any other mode

Textbooks	
T1	Randy Connolly, Ricardo Hoar, 1st Edition, Pearson Education India.
T2	
T3	
T4	
Reference books	
R1	Robin Nixon, “Learning PHP, MySQL & JavaScript with jQuery, CSS and HTML5”, 4th Edition, O’Reilly Publications, 2015.
R2	Luke Welling, Laura Thomson, “PHP and MySQL Web Development”, 5th Edition, Pearson Education, 2016.
R3	Nicholas C Zakas, “Professional JavaScript for Web Developers”, 3rd Edition, Wrox/Wiley India, 2012.
R4	David Sawyer Mcfarland, “JavaScript & jQuery: The Missing Manual”, 1st Edition, O’Reilly/Shroff Publishers & Distributors Pvt Ltd, 2014

Web links and Video Lectures (e-Resources):	
1	<a href="https://sites.google.com/skit.org.in/psp-website/about-faculty">https://sites.google.com/skit.org.in/psp-website/about-faculty</a>
2	
3	
4	
5	



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Assessment Schedule:						
Sl.No.	Assessment type	Contents	CO	Duration In Hours	Marks	Date & Time
1	CIE Test 1	M1 and M2	CO1,CO2	1hr 15min	30	
2	CIE Test 2	M3 and M4	CO3,CO4	1hr 15min	30	
	CIE Test 3	M4 and M5	CO4,CO5	1hr 15min	30	
3	Assignment 1	M1 and M2				
4	Assignment 2	Infosys springboard Certification				
5	Seminar (or any planned activity)	Mini Project or Seminar				
6	Semester End Examination					

**Seminar:** Group of 6-8 students

Module 1,2,3,4 & 5

**CIE + SEE = 60 + 40 = 100 marks**

Faculty Incharge

DAC Chairman

*\*\* Please mention as per the scheme.*