



# 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., Belagavi)

#29, Chimney Hills, Hesaraghatta Main Road, Chikkabanavara Post, Bengaluru- 560090

## Dept. of Artificial Intelligence & Machine Learning

Academic Year: 2022-2023	Semester: VI
Course Name: WEB PROGRAMMING	Course Code: 18AI643
Total Contact hours: 3	Credits:3
SEE Marks:40; CIE:60	Total Marks: 100
Course Plan Author: Ms.Ramya H	Date: 25/03/2023

**Course Prerequisites:** Basics of html and css.

### Course Objectives:

- CLO 1. Illustrate the Semantic Structure of HTML and CSS
- CLO 2. Compose forms and tables using HTML and CSS
- CLO 3. Design Client-Side programs using JavaScript and Server-Side programs using PHP
- CLO 4. Infer Object Oriented Programming capabilities of PHP
- CLO 5. Examine JavaScript frameworks such as jQuery and Backbone

### Course Outcomes:

At the end of the course the student will be able to:

- CO 1. Adapt HTML and CSS syntax and semantics to build web pages.
- CO 2. Construct and visually format tables and forms using HTML and CSS
- CO 3. Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.
- CO 4. Appraise the principles of object oriented development using PHP
- CO 5. Inspect JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features.

CO Number	Course Outcome	Blooms' Level
CO1	Adapt HTML and CSS syntax and semantics to build web pages.	L2
CO2	Construct and visually format tables and forms using HTML and CSS	L2
CO3	Develop Client-Side Scripts using JavaScript and Server-Side Scripts using PHP to generate and display the contents dynamically.	L3
CO4	Appraise the principles of object oriented development using PHP	L2
CO5	Inspect JavaScript frameworks like jQuery and Backbone which facilitates developer to focus on core features.	L3

### Program Outcomes and Program Specific Outcomes



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## Dept. of Artificial Intelligence & Machine Learning

PO, PSO	<ol style="list-style-type: none"><li>1. <i>Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an Engineering specialization to the solution of complex problems in Computer Science and Engineering.</i></li><li>2. <i>Problem Analysis: Identify, formulate, review research literature and analyze complex Computer Science Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.</i></li><li>3. <i>Design / Development of Solutions: Design solutions for complex Computer Science 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.</i></li><li>4. <i>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 related to Computer Science Engineering.</i></li><li>5. <i>Modern Tool Usage: Ability to create, select, and apply appropriate techniques, resources and modern engineering and IT tools including prediction, modeling and analysis to complex Computer Science Engineering activities with an understanding of the limitations.</i></li><li>6. <i>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.</i></li><li>7. <i>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.</i></li><li>8. <i>Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.</i></li><li>9. <i>Individual and Teamwork: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary settings.</i></li><li>10. <i>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 and design documentation, make effective presentations and give and receive clear instructions.</i></li></ol>
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11. *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.*

12. *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.*

*PSO1: Graduates will have the ability to adapt, contribute and innovate ideas in the field of Artificial Intelligence and Machine Learning.*

*PSO2: To provide a concrete foundation and enrich their abilities to qualify for Employment, Higher studies and Research in various domains of Artificial Intelligence and Machine Learning such as Data Science, Computer Vision, Natural Language Processing with Ethical Values.*

*PSO3: Graduates will acquire the practical proficiency with niche technologies and open-source platforms and to become Entrepreneur in the domain Artificial Intelligence and Machine Learning.*

### 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	3		2
CO2				2	2		1			2		1	3		2
CO3	2		2		2		1				2	1		2	2
CO4	1		2		2			1		2					2
CO5			2	1	2			2	3			2	3		1



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## Dept. of Artificial Intelligence & Machine Learning

### Course Content (Syllabus)

Module 1	Contact Hours
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. <b>Textbook 1: Ch. 2, 3</b> <b>RBT: L1, L2, L3</b>	8
<b>Module 2</b>	
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. <b>Textbook 1: Ch. 4,5</b> <b>RBT: L1, L2, L3</b>	8
<b>Module 3</b>	
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 <b>Textbook 1: Ch. 6, 8</b> <b>RBT: L1, L2, L3</b>	8
<b>Module 4</b>	
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 <b>Textbook 1: Ch. 9, 10</b> <b>RBT: L1, L2, L3</b>	8
<b>Module 5</b>	
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. <b>Textbook 1: Ch. 13, 15,17</b> <b>RBT: L1, L2, L3</b>	8

### Schedule of Instruction



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Sl.no	Class no	Module	Topic	Reference (Book, Page no.)	Course Outcome	Delivery mode
1	1	<b>Module 1:</b>	Introduction to HTML, What is HTML and Where did it come from?	T1, 99-101	CO1	ICT
2	2		HTML Syntax, Semantic Markup, Structure of HTML Documents	T1,103-110	CO1	ICT
3	3		Quick Tour of HTML Elements	T1,112-124	CO1	ICT, Black board
4	4		HTML5 Semantic Structure Elements	T1,125-133	CO1	ICT, Black board
5	5		Introduction to CSS, What is CSS, CSS Syntax	T1,140-144	CO1	ICT, Black board
6	6		Location of Styles, Selectors	T1,147-158	CO1	ICT
7	7		The Cascade: How Styles Interact	T1,160-163	CO1	ICT
8	8		The Box Model, CSS Text Styling	T1,166-182	CO1	ICT, Black board
9	9	<b>Module 2:</b>	HTML Tables and Forms, Introducing Tables,	193-196	CO2	ICT
10	10		Styling Tables	199-200	CO2	ICT
11	11		Introducing Forms, Form Control Elements	202-216	CO2	ICT
12	12		Table and Form Accessibility, Micro formats, Advanced	218-221	CO2	ICT
13	13		CSS: Layout, Normal Flow	228-229	CO2	ICT
14	14		Positioning Elements, Floating Elements	232-243	CO2	ICT
15	15		Constructing Multicolumn Layouts	247-251	CO2	ICT
16	16		Approaches to CSS Layout, Responsive Design	253-262	CO2	ICT
17	17		CSS Frameworks.	264-266	CO2	ICT
18	18	<b>Module 3:</b>	JavaScript: Client-Side Scripting, What is JavaScript and What can it do?,	275-279	CO3	ICT
19	19		JavaScript Design Principles	284-291	CO3	ICT



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20	20		Where does JavaScript Go?, Syntax, JavaScript Objects	291-305	CO3	ICT
21	21		The Document Object Model (DOM)	305-312	CO3	ICT
22	22		JavaScript Events, Forms	312-322	CO3	ICT
23	23		Introduction to Server-Side Development with PHP	366	CO3	ICT
24	24		What is Server-Side Development	367-369	CO3	ICT
25	25		A Web Server's Responsibilities	372-378	CO3	ICT
26	26		Quick Tour of PHP	380-386	CO3	ICT
27	27		Program Control, Functions	390-400	CO3	ICT
28	28	<b>Module 4:</b>	PHP Arrays and Superglobals	408	CO4	ICT, Black board
29	29		Arrays, \$_GET and \$_POST Superglobal Arrays	409-424	CO4	ICT
30	30		\$_SERVER Array, \$_Files Array	426-435	CO4	ICT
31	31		Reading/Writing Files,	436-437	CO4	ICT
32	32		PHP Classes and Objects ,Object-Oriented Overview, Classes and Objects in PHP	446-458	CO4	ICT
33	33		Object Oriented Design	459-473	CO4	ICT
34	34		Error Handling and Validation What are Errors and Exceptions?	547-550	CO4	ICT
35	35		PHP Error Reporting	550-552	CO4	ICT
36	36		PHP Error and Exception Handling	553-556	CO4	ICT
37	37		<b>Module 5:</b>	Managing State, The Problem of State in Web Applications	585	CO5
38	38	Passing Information via Query Strings, Passing Information via the URL Path		588-590	CO5	ICT
39	39	Cookies, Serialization, Session State, HTML5 Web Storage,		591-607	CO5	ICT
40	40	Caching		607-609	CO5	ICT



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41	41		Advanced JavaScript and jQuery, JavaScript Pseudo-Classes, jQuery Foundations, AJAX,.	657-687	CO5	ICT
42	42		Asynchronous File Transmission, Animation, Backbone MVC Frameworks,	688-701	CO5	ICT
43	43		XML Processing and Web Services, XML Processing,	762-773	CO5	ICT
44	44		JSON, Overview of Web Services	778-788	CO5	ICT

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

Textbooks	
T1	Randy Connolly, Ricardo Hoar, "Fundamentals of Web Development", 1 <sup>st</sup> Edition, Pearson Education India. (ISBN:978-9332575271)
Reference books	
R1	Robin Nixon, "Learning PHP, MySQL & JavaScript with jQuery, CSS and HTML5" 4 <sup>th</sup> Edition, O'Reilly Publications, 2015. (ISBN:978-9352130153)
R2	Luke Welling, Laura Thomson, "PHP and MySQL Web Development", 5 <sup>th</sup> Edition, Pearson Education, 2016. (ISBN:978-9332582736)
R3	Nicholas C Zakas, "Professional JavaScript for Web Developers", 3 <sup>rd</sup> Edition, Wrox/Wiley India, 2012. (ISBN:978-8126535088)
R4	David Sawyer Mcfarland, "JavaScript & jQuery: The Missing Manual", 1 <sup>st</sup> 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/webprogramming/home">https://sites.google.com/skit.org.in/webprogramming/home</a>
2	<a href="https://www.youtube.com/watch?v=qz0aGYrrlhU-">https://www.youtube.com/watch?v=qz0aGYrrlhU-</a> About HTML ,CSS
3	<a href="https://www.youtube.com/watch?v=KBT2gmAfav4-">https://www.youtube.com/watch?v=KBT2gmAfav4-</a> PHP programming
7	<a href="https://www.youtube.com/watch?v=PkZNo7MFNFg-">https://www.youtube.com/watch?v=PkZNo7MFNFg-</a> About Java Script

Assessment Schedule:						
Sl.No.	Assessment type	Contents	CO	Duration In Hours	Marks	Date & Time
1	CIE Test 1	Module 1,2	CO1,CO2	1:15	30	
2	CIE Test 2	Module 3,4	CO3,CO4	1:15	30	
3	CIE Test 3	Module 4,5	CO4,CO5	1:15	30	
4	Assignment 1	Module 1,2	CO1,CO2		10	



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5	Assignment 2	Module 3,4	CO3,CO4		10	
6	Assignment 3	Edex course	CO1-CO5		10	

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

Module 1,2,3,4 & 5

**\*\*The sum of total marks of three tests, two assignments, and seminar will be out of 100 marks and will be scaled down to 50 marks.**

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

Faculty Incharge

DAC Chairman

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