

<b>Semester: 4</b>				
<b>Programme : B.Sc. Computer Science (Hons)</b>				
<b>Course : Web Technology</b>				
<b>Paper code: S2CS230421P</b>			<b>Credits: 3</b>	
<b>Hours/week : 5</b>				
<b>Category: Core/MDC/SEC/VAC : sec</b>				
<b>Theory / Practical / Composite : Practical</b>				
<b>No of Modules : 1</b>				
<p><b>Course Overview:</b> This course provides an introduction to fundamental <b>web development technologies</b>. It covers the structure and design of web pages using <b>HTML</b>, including text formatting, images, hyperlinks, tables, and forms. The course also introduces <b>CSS</b> for styling and layout of web pages, <b>JavaScript</b> for adding interactivity through event handling, and <b>PHP with MySQL</b> for basic server-side scripting and database interaction. The course aims to develop foundational skills required to design and create simple dynamic websites.</p>				
<b>Course Outcome:</b>				
1. Identify and explain the basic structure of <b>HTML documents</b> , including tags, attributes, and formatting elements.				
2. Develop web pages using <b>HTML elements</b> such as lists, images, hyperlinks, tables, and forms.				
3. Apply <b>CSS techniques</b> (inline, internal, and external) to design and format web pages effectively.				
4. Implement <b>CSS features</b> such as box model, borders, backgrounds, gradients, and media elements for improved webpage layout and presentation.				
5. Use <b>JavaScript event handling</b> to add basic interactivity to web pages.				
6. Develop simple <b>dynamic web applications using PHP and MySQL</b> , including handling form data and database connectivity.				
<p><b>Prerequisites:</b> Students should have a basic understanding of <b>computers and the internet</b>, along with familiarity in using a <b>web browser and simple text editors</b>. Basic knowledge of <b>website structure, file management, and fundamental concepts of web design</b> will help students effectively learn HTML, CSS, and other web development technologies.</p>				
<b>SYLLABUS</b>				
<b>UNIT/Module</b>	<b>CONTENT</b>	<b>HOURS or NUMBER OF CLASSES</b>	<b>CO Mapping</b>	<b>COGNITIVE LEVEL</b>
I.	Basics of HTML, HTML Tags and Attributes, Parts of HTML Document. Text Formatting: Basic Formatting Tags, Unordered Lists, Order List, List Items, Headings, Paragraph attributes, font, text alignments. Image, Hyperlinks, and Audio/Video: Insert Image, Image size, Alternate Text, Hypertext, Hyperlinks (Internal & External), Named Anchors, Email Links, Alternate Text, Image Hyperlinks, Image Mapping, Using Audio and	15	CO1,CO2	K1, K2, K3 (Remember, Understand /Apply)

	video on web pages. Tables: TR, TD, TH, Colspan, Rowspan, Borders. Forms: Different form elements, HTML 5 Elements, Form methods, form action.			
<b>II.</b>	CSS: Different ways to use CSS: Inline CSS, Internal CSS, External CSS. CSS Linear & Radial gradients, CSS Text formatting, CSS Box Model, CSS Border, CSS backgrounds, CSS Box structure, CSS Media, CSS Translation.	<b>CO3,CO4</b>	<b>12</b>	<b>K2, K3, K4 (Understand, Apply, Analyse)</b>
<b>III.</b>	Java Script: Event Handling using Java Script.	<b>CO5</b>	<b>6</b>	<b>K3, K4, K5 (Apply, Analyse, Evaluate)</b>
<b>IV.</b>	PHP: Introduction to PHP, Form Data using PHP, Database Handling using PHP and MySQL	<b>CO6</b>	<b>12</b>	<b>K3, K4, K5, K6 (Apply, Analyse, Evaluate, Create)</b>
<b>Text Books</b>				
1. Web Design with HTML, CSS, JavaScript and jQuery – Jon Duckett, Wiley.				
2. Learning PHP, MySQL, JavaScript, CSS & HTML5 – Robin Nixon, O’Reilly Media.				
3. Mastering HTML, CSS & JavaScript Web Publishing – Laura Lemay, Rafe Colburn & Jennifer Kyrnin, BPB Publications.				
<b>Suggested readings</b>				
1. HTML5 Black Book – DT Editorial Services, DreamTech Press.				
2. HTML & CSS: The Complete Reference – Thomas A. Powell, McGraw-Hill.				
3. Designing with Web Standards – Jeffrey Zeldman, New Riders.				
<b>Web Resources</b>				
1. World Wide Web Consortium: <a href="https://www.w3.org/">https://www.w3.org/</a>				
2. W3Schools: <a href="https://www.w3schools.com/">https://www.w3schools.com/</a>				
3. PHP: <a href="https://www.php.net/">https://www.php.net/</a>				
<b>Evaluation : PRACTICAL EVALUATION</b>				

<b>COs</b>	<b>CO Description</b>	<b>Cognitive levels</b>
<b>CO1</b>	Explain the fundamental structure of HTML documents, including tags, attributes, and text formatting elements.	K1, K2
<b>CO2</b>	Construct web pages using core HTML elements such as lists, images, hyperlinks, tables, and forms.	K2, K3
<b>CO3</b>	Apply CSS (inline, internal, and external) to design and format web pages effectively.	K2, K3
<b>CO4</b>	Demonstrate advanced CSS features including box model, borders, backgrounds, gradients, and media elements to enhance layout and presentation.	K3, K4
<b>CO5</b>	Implement JavaScript event handling to develop interactive web elements.	K3, K4, K5
<b>CO6</b>	Develop dynamic web applications using PHP and MySQL, including form handling and database connectivity.	K3, K4, K6