

Branch Name:	IMCA
Program Code:	2CS301
Course Name:	Web Technology-I
Course Code:	2CS3010102T
Prerequisite Course:	Basic knowledge of computer fundamentals and the Internet.

Course Objective:

1. To understand the fundamental concepts of Web Technology, Internet, World Wide Web (WWW), and Web Standards.
2. To develop structured and semantic web pages using HTML5 elements and attributes.
3. To design web pages using HTML5 tables, multimedia, forms, and hyperlinks.
4. To apply CSS3 selectors, properties, and layout techniques for effective web page presentation.
5. To design user-friendly, standards-compliant, and responsive static web pages using HTML5 and CSS3.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
3	-	-	3	50	50	-	-	100

Course Contents:

Unit No	Topic	Total Hours	Weightage (%)
1	Introduction of Web Technology: Web Technology, Evolution of Internet, World Wide Web (WWW), Web Pages, Website, Static and Dynamic Websites, Web Browser, Web Server, Frontend Development, Backend Development, Web Development Process, Principles of Good Web Design, Planning Process of Web Designing, Web Standards (W3C). Basic in Web Design: Internet Services, Client-Server Architecture, Overview of Internet Protocols – HTTP, HTTPS, SMTP and FTP, Domain Name System (DNS), URL, Domain Name, Web Hosting, Home Page, Navigation Bar, Types of Navigation Bar, Website Structure.	10	25

2	Introduction to HTML: Introduction to HTML, HTML5, Features of HTML5, HTML Documents, Basic Structure of an HTML Document, Creating an HTML Document, HTML Elements, HTML Tags and Attributes, Headings, Paragraphs, Line Breaks, Comments. Basic Elements of HTML: HTML Tag vs. Element, Types of Elements (Block-level and Inline Elements), Semantic and Non-Semantic Elements, DIV and SPAN Elements. Basic Formatting Tags: Text Formatting Tags, Text Styles, Block-level Formatting, Horizontal Rule (<hr>), Images (), HTML Entities. Working with Lists, Hyperlinks and Multimedia: Lists (Ordered List, Unordered List, Description List), Hyperlinks, Images, Audio, Video, Introduction to Forms and Form Controls.	12	25
3	Working with HTML Tables: Introduction to HTML Tables and Their Structure, Table Tags (<table>, <tr>, <th>, <td>), Table Attributes, Table Headers, Table Caption, Cell Padding and Cell Spacing, Rowspan and Colspan, Table Sections (<thead>, <tbody>, <tfoot>), Column Group (<colgroup>, <col>), Nested Tables. Working with Inline Frames: Introduction to Inline Frames (<iframe>), Embedding Web Pages, Images and Multimedia using <iframe>, Attributes of <iframe>. Working with HTML Forms: Creating Forms, <form> Tag, Form Attributes, <input> Tag, HTML5 Input Types (Text, Password, Email, Number, Date, Time, URL, File, Hidden, Radio, Checkbox, Range, Color), Text Area, Select, Option, Button, Submit, Reset, Label, Fieldset, Legend, Form Validation (Required, Placeholder, Pattern, Readonly, Disabled), Passing Form Data.	13	25
4	Introduction to CSS: Introduction to CSS, Benefits of CSS, CSS Versions, CSS Syntax, Types of CSS (Inline, Internal and External Style Sheets), Linking External Style Sheets using <link>, Multiple Style Sheets, CSS Comments, CSS Units (Absolute and Relative Units), CSS Colors. CSS Selectors: Element Selector, ID Selector, Class Selector, Grouping Selector, Universal Selector, Descendant Selector, Child Selector, Attribute Selector, Pseudo-Class Selector, Pseudo-Element Selector.	12	25

	CSS Properties: Background, Colors, Fonts, Text, Borders, Margins, Padding, Lists, Tables, Box Model, Display, Positioning, Float, Overflow.		
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Text Books:

1. **Jon Duckett**, *HTML and CSS: Design and Build Websites*, Wiley.
2. **Jennifer Robbins**, *Learning Web Design: A Beginner's Guide to HTML5, CSS3, JavaScript and Web Graphics*, O'Reilly Media.
3. **Thomas A. Powell**, *HTML & CSS: The Complete Reference*, McGraw-Hill Education.

Reference Books:

1. **Steven M. Schafer**, *HTML, XHTML and CSS: Bible*, Wiley.
2. **Robin Nixon**, *Learning PHP, MySQL & JavaScript*, O'Reilly Media. (Useful for future web development courses.)
3. **David Sawyer McFarland**, *CSS: The Missing Manual*, O'Reilly Media.
4. **Paul McFedries**, *HTML5 and CSS3 Complete*, Teach Yourself Series.

List of Open Source Software/learning website:

1. www.w3school.com
2. www.tutorialspoint.com
3. www.geeksforgeeks.org
4. <https://developer.mozilla.org>
5. <https://www.freecodecamp.org>

Course Learning Outcomes (CLO):

CLO	Description	Bloom's Taxonomy Level
CLO1	Explain the fundamentals of Web Technology, Internet architecture, and Web Standards.	2 Understanding
CLO2	Develop static web pages using HTML5 elements, tags, attributes, lists, hyperlinks, tables, and multimedia.	3 Applying
CLO3	Design web forms using HTML5 form elements, input controls, and basic form validation techniques.	3 Analyzing
CLO4	Apply CSS3 selectors, properties, and styling techniques to format web pages.	3 Applying
CLO5	Design structured and visually appealing web page layouts using HTML5 and CSS3.	6 Creating
CLO6	Develop standards-compliant and user-friendly web pages by integrating HTML5 and CSS3 concepts.	6 Creating

Mapping of CLOs with Pos & PSOs

Course	Program Outcomes (POs)												Program Specific Outcomes (PSOs)	
Learning Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CLO1	H	M	-	-	L	-	L	-	-	-	-	-	H	L
CLO2	H	M	H	-	M	-	-	-	L	-	-	-	H	M
CLO3	H	H	H	-	M	-	-	-	L	-	-	-	H	M
CLO4	M	M	H	-	H	-	-	-	-	-	-	-	H	H
CLO5	M	H	H	L	H	-	L	-	M	-	L	L	H	H
CLO6	H	H	H	L	H	L	M	L	M	L	L	M	H	H