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| **WEB TECHNOLOGIES** | | | | | | |
| |  |  |  |  | | --- | --- | --- | --- | | **L** | **T** | **P** | **Credit** | | **3** | **0** | **2** | **4** | | | | | | | |
| Preamble | | | | This course is designed to impart the knowledge to create dynamic web pages for real time applications. | | |
| Prerequisites | | | | Nil | | |
| **UNIT – I** | | | |  | | **9** |
| **Introduction to Web development:** Types of Client-Server Architecture-Components of web application - Static web pages - Dynamic web pages - Tools for web development - Web development issues – Survey of web browser, Client and Server Scripting Languages. | | | | | | |
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| **UNIT – II** | | | |  | | **9** |
| **HTML Elements and Attributes:** Structure of HTML document- Presentational Tags - Phrase Tags – Basic Elements: Text, Paragraphs, Lists, Links, Images, Audioand Video, Tables, Forms – Frames- – iFrames. | | | | | | |
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| **UNIT – III** | | | |  | | **9** |
| **Formatting HTML Elements:** Overview of CSS – CSS Types- Measurement units and colors - Box model: Margin, Background, Border, Padding- Selectors - Pseudo classes -Pseudo Elements – Image Gallery – Image Sprites – Page Layout-Design Issues – Advanced HTML5 and CSS3 features - Responsive Web Design. | | | | | | |
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| **UNIT – IV** | | | |  | | **9** |
| **Client Side Scripting:** Introduction to Java Script – Statements – Arrays – Functions – Objects – Strings - Regular Expression - Error Handling | | | | | | |
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| **UNIT – V** | | | |  | | **9** |
| **DHTML:** Document Object Model: Introduction - Modeling a Document: DOM Nodes andTrees - Traversing and Modifying a DOM Tree - DOM Collections - Dynamic Styles - Event Handling. | | | | | | |
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| **List of Exercises / Experiments :** | | | | | | |
| 1. 1. Design a web page using basic tags with frames. | | | | | | |
| 1. Create a web page with the following    1. To embed an image map in a web page    2. To fix the hot spots    3. To show all the related information when the hot spots are clicked. | | | | | | |
| 1. Design a web page using CSS. | | | | | | |
| 1. Develop a web page using selectors, pseudo classes, pseudo elements and box model. | | | | | | |
| 1. Write a java script program using built-in-objects. | | | | | | |
| 1. Write a java script program for implementing business logic in an application. | | | | | | |
| 1. Write a java script program to validate a form data using regular expression | | | | | | |
| 1. Write a java script program to traverse a HTML document using DOM | | | | | | |
| 1. Write a program to implement event handling using java script | | | | | | |
| 1. Design a Responsive Web Page | | | | | | |
| **Lecture:45, Practicals:30, Total:75** | | | | | | |
| **REFERENCES BOOKS:** | | | | | | |
| 1. | Jennifer Niederst Robbins, “Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics”, Fifth Edition, O’REILLY Media,Inc. ,2018. | | | | | |
| 2. | DT Editorial Services, “HTML 5 Black Book (Covers CSS3, JavaScript, XML, XHTML, AJAX, PHP, jQuery)”, Dreamtech Press, Second Edition, 2016. | | | | | |
| 3. | Anne Boehm, [Zak Ruvalcaba](https://www.amazon.com/s/ref=rdr_ext_aut?_encoding=UTF8&index=books&field-author=Zak%20Ruvalcaba), Murach's HTML5 and CSS3, Mike Murach’s Associates Inc. Fourth Edition , 2012. | | | | | |
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| **MANUALS** | | | | | | |
| 1. | | Anne Boehm, [Zak Ruvalcaba](https://www.amazon.com/s/ref=rdr_ext_aut?_encoding=UTF8&index=books&field-author=Zak%20Ruvalcaba), “Lab Manual for Murach's HTML5 and CSS3, Fourth Edition, 2018. | | | | |
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| **SOFTWARES** | | | | | | |
| 1. | | Notepad++, Eclipse, MVS., etc., | | | | |
| **COURSE OUTCOMES:**  On completion of the course, the students will be able to | | | | | **BT Mapped (Highest Level)** | |
| CO1: | | | explain the components and issues in web development | | Understanding | |
| CO2: | | | show the structure of web page content through HTML | | Applying | |
| CO3: | | | Format the HTML elements by using CSS | | Understanding | |
| CO4: | | | Interpret and exercise the business logic through JavaScript | | Understanding | |
| CO5: | | | design the dynamic websites | | Applying | |
| CO6: | | | Develop a web pages using basic html elements with CSS properties | | Applying | |
| CO7: | | | Implement a business logic using java script | | Applying | |
| CO8: | | | Design a Responsive Web Pages | | Applying | |

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| **Mapping of COs with POs and PSOs** | | | | | | | | | | | | |
| COs/POs | PO1  (k3) | PO2  (k4) | PO3  (k5) | PO4  (k5) | PO5  (k6) | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CO1(k2) | 2 | 1 |  |  |  |  |  |  |  |  |  |  |
| CO2(k3) | 3 | 2 | 1 | 1 |  |  |  |  |  |  |  |  |
| CO3(k2) | 2 | 1 |  |  |  |  |  |  |  |  |  |  |
| CO4(k2) | 2 | 1 |  |  |  |  |  |  |  |  |  |  |
| CO5(k3) | 3 | 2 | 1 | 1 |  |  |  |  |  |  |  |  |
| CO6(k3) | 3 | 2 | 1 | 1 |  |  |  |  |  |  |  |  |
| CO7k3) | 3 | 2 | 1 | 1 |  |  |  |  |  |  |  |  |
| CO8(k3) | 3 | 2 | 1 | 1 |  |  |  |  |  |  |  |  |
| 1 – Slight, 2 – Moderate, 3 – Substantial | | | | | | | | | | | | |