Part A Introduction		
Program: Certificate	**Year: First Year**	**Session: 2021-22**

Course Code	**V1-COS-WEBT**
Course Title	**Web Designing**
Course Type	**Vocational**
Pre-requisite (if any)	**Open for All**
Course Learning outcomes (CLO)	**After studying this Course the student will be able to –** ❖ Code a handful of useful HTML & CSS examples ❖ Build semantic, HTML & CSS web page ❖ Write basic scripts ❖ Use Names, Objects, and Methods ❖ Add Interactivity to a Web Page ❖ Create Dynamic Web Pages using Java Script in HTML forms.
Expected Job Role / Career opportunities	**Job Role -** Web Designer / Front End Developer/ Creative Ad Designer **Job Description –** Web designers develop functional and appealing web pages, websites, web applications, online advertisements for individuals, businesses and government agencies to establish their online presence. They use knowledge of computer programming and graphic design to create websites that meet client needs. **Career Opportunities –** Typical employers of web designers are – ❖ Software companies ❖ IT consultancies ❖ Specialist web design companies ❖ Large corporate organisations ❖ Any organisation that uses computer systems ❖ Self-employment/freelance work is often possible for individuals with appropriate experience. ❖ Vacancies are advertised online, by career services and by recruitment agencies.
Credit Value	**(4) Theory – 2 Practical – 2**

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Part B- Content of the Course		
Total No. of Lectures + Practical (in hours per week): **L-2 Hrs / P-2 Hrs**		
Total No. of Lectures/ Practical: **L-30hrs/P-30hrs**		
Module	**Topics**	**No. of Hours**
I	**Introduction to Internet-** World Wide Web, Internet Addressing, Browser, URL, Web server, website, homepage, Domain Name. Basic concepts. **Softwares for Web Designing -** Notepad/Notepad++, Dreamweaver, Blue Griffon, Net beans, Sea Monkey, Word press, Sublime. **Introduction to HTML**: HTML Tags and Attributes, HTML Basic Tags, Formatting Tags, HTML Color Coding, Div and Span Tags for Grouping. **Lists**: Unordered Lists, Ordered Lists, Definition list. Images: Image and Image Mapping **Hyperlink**: URL - Uniform Resource Locator, URL Encoding. Table: <table>, <th>, <tr>, <td>, <caption>, <thead>, <tbody>, <tfoot>, <colgroup>, <col>. Attributes Using Iframe as the Target **Form**: <input>, <textarea>, <button>, <select>, <label> **Headers**: Title, Base, Link, Styles, Script HTML Meta Tag, XHTML, HTML Deprecated Tags & Attributes	6
II	**CSS:** Introduction, Features and benefits of CSS, CSS Syntax, External Style Sheet using <link>, Multiple Style Sheets, Value Lengths and Percentages. **Selectors**: ID Selectors, Class Selectors, Grouping Selectors, Universal Selector, Descendant / Child Selectors, Attribute Selectors, CSS – Pseudo Classes. **Color Background Cursor**: background-image, background-repeat, background-position, CSS Cursor **Text Fonts**: color, background-color, text-decoration, text-align, vertical-align, text-indent, text-transform, white-space, letter-spacing, word-spacing, line-height, font-family, font-size, font-style, font-variant, font-weight.	5
III	**Lists Tables:** list-style-type, list-style-position, list-style-image, list-style, CSS Tables (border, width & height, text-align, vertical-align, padding, color) **Box Model**: Borders & Outline, Margin & Padding, Height and width, CSS Dimensions. **Display Positioning**: CSS Visibility, CSS Display, CSS Scrollbars, CSS Positioning (Static Positioning, Fixed Positioning, Relative Positioning, Absolute Positioning), CSS Layers with Z-Index. **Floats**: The float Property, The clear Property, The clearfix Hack.	5

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IV	**The JavaScript**: Nature of JavaScript, Script Writing Basics, Enhancing HTML Documents with JavaScript, The Building Blocks. Introduction to JavaScript, JavaScript Engines, Values, Variables and Operators, Variable Mutation, Basic Operators, Operator Precedence, JavaScript Types, Types Definition, Types in JavaScript, Objects, Type Conversion and Coercion, Static vs Dynamic Type Checking. **JavaScript Conditionals**: Introduction to Conditionals, Conditionals in JavaScript, Ternary Operators and Conditionals. Conditional Ladder & Switch statement. **JavaScript Arrays**: Introduction to Arrays, Declaring and Mutating Arrays, Array Methods and Properties, Replication with Array Methods, Multi-dimensional Arrays.	7
V	**JavaScript Loops**: Introduction to Loops, Loops in JavaScript, While and Do/While Loops, For Loops, Break and Continue in Loops, Iterating Arrays, Iterating Objects. **JavaScript Functions**: Introduction to Functions, Functions in JavaScript, Nested Functions in JavaScript, Arrow Functions in JavaScript, Function as an Argument, Function as the Returned Object, **JavaScript Scope**: Scope Introduction, Scope in JavaScript, Lexical Scope, Module Scope. Method of Adding Interactivity to a Web Page, Creating Dynamic Web Pages; Concept of Java Scripting the Forms. Java Scripting the Forms, Basic Script Construction, Talking to the Form Objects, Organizing the Objects and Scripts, Field-Level Validation, Check Required Fields like Validating Zip Code, Automated Formatting, Format Phone, Format Money, Automatic Calculation, Calculate Expiration Date, Calculate Amount etc .	7

Abhilasha Kumar
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	Practicals	
	1. Design a home page which displays information about your college department using headings, HTML entitites and paragraphs. 2. Implement different type of list tags in the college department homepage. 3. Create a webpage for any clinic using marquee and HTML formatting tags. 4. Create 3 Hyperlinks in home page connecting it to 3 different pages. 5. Create 3 hyperlinks in a page, which jumps to 3 different headings on same page. 6. Insert image(s) and iframe in a webpage. 7. Design a page with image of block diagram of computer, mapping each component as area with specific co-ordinates which when clicked may give their detail. 8. Create a web page having two frames, Frame 1 containing links and another with contents of the link. When link is clicked appropriate contents should be displayed on Frame 2. 9. Design a timetable and display it in tabular format. 10. Demonstrate difference between "get" and "post" method of form tag in a form with name and password text fields. 11. Design an admission form for any course in your college with text, password fields, drop-down list, check-boxes, radio buttons, submit and reset button etc. **12.** Create a website for online book store with Home, Login, Catalogue, Registration page with links to all these pages in a menu on top of every page. Embed heading, paragraph, images, video, iframe, form controls, table, list in this website. 13. Write a CSS style specification rule that would make all unordered lists (tags) have square bullets and a purple background. 14. Create a HTML form with the use of cascading style sheets. 15. Design a web page of your Home town with a attractive background color, text color, an image, font face by using Inline CSS formatting. 16. Create a catalog for an online shopping company that sells music records using style sheets. 17. Create a sample code to illustrate the Inline style sheet for your web page. 18. Create a sample code to illustrate the External style sheet for your web page 19. Design a web page by using different CSS border styles. 20. Demonstrate the use of CSS Box Model. 21. Change the color of all elements with the class "colortext" to "Blue". 22. Set different margins for all four sides of a paragraph.	**15**

Abhilasha Kumar

Chairman, Central Board of Studies, Computer Science

	1. Write a JavaScript program to display the current day and time . 2. Write a JavaScript program to remove a character at the specified position of a given string and return the new string. 3. Write a JavaScript program to get the current date. 4. Write a JavaScript program to find the area of a triangle. 5. Write a JavaScript program to determine whether a given year is a leap year. 6. Write a JavaScript program to calculate multiplication and division of two numbers. 7. Write a JavaScript program to convert temperatures to and from Celsius, Fahrenheit. 8. Write a JavaScript program to check whether a given positive number is a multiple of 3. 9. Write a JavaScript program to change the case of a string.(i.e upper case to lower case and vice-versa). 10. Write a JavaScript program to compute the sum of elements of given array of integers. 11. Develop and demonstrate a HTML file that includes JavaScript script for taking a number n as input using prompt and display first n Fibonacci numbers in a paragraph. 12. Develop and demonstrate a HTML file that includes JavaScript script for taking full name in a text field and display first, middle, last name in 3 different labels. Middle and last name may be optional, thus message like "NA" should be displayed in corresponding labels. If input contains 2 words, then they should be considered as first and last name. 13. Develop and demonstrate a HTML file that includes JavaScript script for switching an image source for a image on click of "change" and "original" button. 14. Design HTML form for keeping student record, apply JavaScript validation in it for restriction of mandatory fields, numeric field, email-address field, specific value in a field etc. 15. Write a JavaScript code that displays text "Bigger Text" with increasing font size in the interval of 10ms in red color, when the font size reaches 50pt it displays "Smaller Text" in green color. Then the font size should decrease to 5pt and then stop.	15

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Part C-Learning Resources

Text Books, Reference Books, Other resources

1. **Suggested Readings:**
   - Jon Duckett, HTML And CSS: Design And Build Websites, Wiley
   - Jon Duckett, JavaScript And Jquery: Interactive Front-End Web Development, Wiley
   - Jennifer Niederst Robbins, Learning Web Design: A Beginner's Guide To HTML, CSS, JavaScript, And Web Graphics, O'reilly
   - Steven M. Schafer, Html, XHTML, And CSS Bible, Wiley
   - Felke-Morris, Basics Of Web Design: Html5 & Css3, 5th Edition, Pearson Education, 2019.
   - Felke-Morris, Web Development & Design Foundations With Html5, 10th Edition, Addison-Wesley, 2020.
   - Ian Pouncey, Richard York, Beginning CSS: Cascading Style Sheets For Web Design, Wiley India.
   - Thomas A Powell, The Complete Reference To Html
   - Lee Anne Philips, Using Html, PHI
   - C. Xavier, World Wide Web Design With Html,
   - Xavier C, Web Technology And Design, New Age International
   - Laura Lemay, Mastering Html, CSS & JavaScript Web Publishing
   - Dt Editorial Services, Html 5 Black Book - Covers CSS 3, JavaScript, XML, XHTML, AJAX, PHP and Jquery, DreamTech Press Publication

2. **Suggestive digital platforms web links:**
   - https://www.w3schools.com/
   - https://spoken-tutorial.org/
   - https://www.doc-developpement-durable.org/file/Projets-informatiques/cours-&-manuels-informatiques/htm-html-xml-ccs/Sams%20Teach%20Yourself%20HTML,%20CSS,%20and%20JavaScript%20All%20in%20One.pdf (PDF: 608 pages)
   - http://www.nematrian.com/Pages/HTMLCSSJSCombined.pdf (PDF: 514 pages)
   - https://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf (PDF: 681 pages)

Suggested equivalent online courses:

- https://nptel.ac.in/courses/106/105/106105084/ (NPTEL Course: Internet Technology – Part of the Course)
- https://onlinecourses.swayam2.ac.in/aic20_sp11/preview (HTML and CSS)
- https://www.coursera.org/learn/html-css-javascript-for-web-developers#syllabus (HTML, CSS, and JavaScript for Web Developers)
- https://www.classcentral.com/course/html-css-javascript-for-web-developers-4270 (HTML, CSS, and JavaScript for Web Developers)
- https://www.classcentral.com/course/duke-programming-web-4256
- https://www.coursera.org/learn/duke-programming-web (Programming Foundations with JavaScript, HTML and CSS)

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