

Maharashtra State Board of Technical Education (MSBTE)**'T' Scheme**

II – Semester Course Curriculum

Course Title: **Web Page Designing with HTML (IF, CO)**

(Course Code:)

Diploma programme in which this course is offered	Semester in which offered
Computer Engineering, Information Technology	Second

1. RATIONALE

Website design is a broad term that encompasses a wide variety of tasks, all involved in the formation of web pages. There are essentially two types of web design approaches, which are dynamic and static design. Static web design is typically based on basic HTML code. It is essential for diploma student to learn HTML since the task of static website design is performed by using HTML coding. Even in dynamic websites, the task of presentation of content is handled through HTML coding. This course introduce web page design using HTML5 and also give emphasis on learning Cascading Style Sheets (CSS) which is a style sheet language used for describing the presentation of a document written in a markup language for formatting and styling of content. This learning enables students to design static web sites and host it on Internet/Intranet.

2. COMPETENCY

The aim of this course is to help the student to attain the following industry identified competency through various teaching learning experiences:

- **Develop static interactive web-sites.**

3. COURSE OUTCOMES (COs)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following *industry oriented* COs associated with the above mentioned competency:

- Use block level formatting tags to present content on web page.
- Use text level formatting tags to present content on web page.
- Apply hyper linking on web page.
- Organize the content using table and frames.
- Apply presentation schemes on content using CSS.
- Publish websites on Internet or Intranet.

4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				
L	T	P		Theory Marks		Practical Marks		Total Marks
2#	-	2	C	ESE	PA	ESE	PA	
2#	-	2	4	-	-	50	50~ ²	100

(~²): For the *practical only courses*, the PA has two components under practical marks i.e. the assessment of practicals (seen in section 6) has a weightage of 60% (i.e.30 marks) and micro-project assessment (seen in section 12) has a weightage of 40% (i.e.20 marks). This is designed to facilitate attainment of COs holistically, as there is no theory ESE.

Legends: *L*-Lecture; *T* – Tutorial/Teacher Guided Theory Practice; *P* - Practical; *C* – Credit, *ESE* - End Semester Examination; *PA* - Progressive Assessment # - No theory exam

5. COURSE MAP (with sample COs, Learning Outcomes i.e.LOs and topics)

This course map illustrates an overview of the flow and linkages of the topics at various levels of outcomes (details in subsequent sections) to be attained by the student by the end of the course, in all domains of learning in terms of the industry/employer identified competency depicted at the centre of this map.



Figure 1 - Course Map

6. SUGGESTED PRACTICALS/ EXERCISES

The practicals/exercises/tutorials in this section are psychomotor domain LOs (i.e.sub-components of the COs), to be developed and assessed in the student to lead to the attainment of the competency.

S. No.	Practical Exercises (Learning Outcomes to be achieved through practicals)	Unit No.	Approx. Hrs. Required
1	Create web page using structure tags to display sample message.	I	02
2	Create a web page for displaying a paragraph using block level tags, HR tags (Part-I)	I	02*
3	Create a web page for displaying a paragraph using block level tags, HR tags (Part-II)	I	02
4	Create a Web Page using Text level tags and Special Characters	II	02
5	Create a web page for implementing different types of Lists.	II	02*
6	Create a web page to link- a) A different web page of same site. b) A different location on the same web page c) A specific location on different web page of same site.	III	02
7	i) Create a web page to link- a) An external page of different web site b) To an email ID ii) Write tags to change colors of links	III	02*
8	Insert images on web page using various attributes	III	02
9	Implement image as a button and set image as background.	III	02
10	Create a web page to implement Frame tags.	IV	02*
11	Create a web page to implement Table tags.	IV	02
12	Create a web page for demonstration of CSS by applying Internal/External/ Inline style	V	06*
13	Install a web server and publish a website on Intranet.	VI	02
14	Publish a website on Internet by acquiring space on free hosting site.	VI	02*
Total			32

Note

- i. A suggestive list of practical LOs is given in the above table, more such practical LOs can be added to attain the COs and competency. A judicious mix of minimum 12 or more practical LOs/tutorials need to be performed, out of which, the practicals marked as ‘*’ are compulsory, so that the student reaches the ‘Precision Level’ of Dave’s ‘Psychomotor Domain Taxonomy’ as generally required by the industry.
- ii. Hence, the ‘Process’ and ‘Product’ related skills associated with each LO of the laboratory/workshop/field work are to be assessed according to a suggested sample given below:

S. No.	Performance Indicators	Weightage in %
a.	Debugging ability	20
b.	Quality of output achieved (Product)	40
c.	Complete the practical in stipulated time	10
d.	Answer to sample questions	20
e.	Submit journal in time	10
Total		100

Additionally, the following affective domain LOs (social skills/attitudes), are also important constituents of the competency which can be best developed through the above mentioned laboratory/field based experiences:

- a. Follow safety practices.
- b. Practice good housekeeping.
- c. Demonstrate working as a leader/a team member.
- d. Maintain tools and equipment.
- e. Follow ethical practices.

The development of the attitude related LOs of Krathwohl's 'Affective Domain Taxonomy', the achievement level may reach:

- 'Valuing Level' in 1st year
- 'Organising Level' in 2nd year
- 'Characterising Level' in 3rd year.

7. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED

The major equipment with broad specification mentioned here will usher in uniformity in conduct of experiments, as well as aid to procure equipment by authorities concerned.

S. No.	Equipment Name with Broad Specifications	Exp. S. No.
1	Computer with a text editor and browser	ALL
2	Scanner : A4 size, supporting image quality 200 DPI or higher	7
3	Computer system with Internet connection	12
4	Web server.	12

8. UNDERPINNING THEORY COMPONENTS

The following topics/subtopics should be taught and assessed in order to develop LOs in cognitive domain for achieving the COs to attain the identified competency.

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics
Unit – I Basics of HTML	1a. Differentiate characteristics of the given type of web sites. 1b. Describe structure of the given HTML page. 1c. Explain use of head tag and body tag in the given web page. 1d. Describe the procedure of using the given block level tag on a web page.	1.1 Fundamentals of World Wide Web(www): Information about Web Browsers, Web Servers and types of sites. Static vs. dynamic web sites Web page structure: DOCTYPE, head, body, title and other meta tags with attributes. 1.2 Block Level Tags And Horizontal Rules: Headings, Paragraphs, Breaks, Divisions, Centered Text, Block Quotes, Preformatted text, types of Address, HR tag.
Unit– II Text Level Tags and List	2a. Describe use of the given special characters in creating Web Page. 2b. Use relevant tag to display the given special characters. 2c. Explain use of the given type of list in Web Pages.	2.1 Text Level Tags And Special Characters: Bold, Italic, Teletype, Underline, Strikethrough, Superscript, Subscript , DIV tag, displaying special characters. 2.2 Lists: Ordered Lists, Unordered Lists, Definition Lists, Nested Lists.

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics
	2d. Describe the procedure of using the given text level tags in creating a Web Page.	
Unit– III URL And Images	3a. Describe feature of the given type of URL. 3b. Describe the given image attribute on a web page. 3c. Explain process of using the given colors/images as page background on a Web Page. 3d. Describe the procedure for creating the given type of hyper linking.	3.1 URL And Anchor Tag: URL : Types of URLs, Absolute URLs, Relative URLs, pros and cons of relative and absolute URLs, Anchor Tag: Linking various documents for internal and external links. 3.2 Images, Colors And Backgrounds: Inserting Images, formatting image for sizing, alignment. Border and using other attributes with IMG tag. Inserting image as page background. Creating solid color page background.
Unit-IV Table And Frames	4a. Explain the given table attributes to organize data on a web page. 4b. Use the given table attribute to change default table setting. 4c. Describe the given type of 'frame' with examples. 4d. Describe the procedure to organize display as per given screen layout using frames.	4.1 Table: Table tag with attributes. TABLE, TR, TH, TD tags. Border, cell spacing, cell padding, width, align, bgcolor attributes. 4.2 Frames : Types of Frames with their attributes, Creating frames: FRAMESET tag – rows, cols attributes.
Unit –V Cascading Style sheets	5a. Describe CSS code for the given type of formatting on a web page. 5b. Describe the given style sheet properties. 5c. Explain the given property of CSS. 5d. Describe the procedure to create CSS for applying the given presentation scheme on a web page.	5.1 Cascading Style Sheets: Different types of Style Sheets, Benefits of using CSS. Adding style to the document: Linking to style sheets, Embedding style sheets, Using inline style, Selectors: CLASS rules, ID rules. 5.2 Style sheet properties: Font, text, box, color and background properties; Creating and Using a simple external CSS file; Using the internal and inline CSS; background and color gradients in CSS Setting font and text in style sheet using table layout.
Unit-VI Website Hosting	6a. Describe the procedure to configure a webserver. 6b. Differentiate hosting requirement on Internet and	6.1 Website Hosting: Concept of Internet and Intranet. Publishing website on Intranet, Installing and configuring web server,

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics
	intranet 6c. Describe the procedure for hosting the given website. 6d. Explain process of uploading the given files on a website.	uploading files on intranet site, access intranet based website; Publishing website site on Internet, hiring Web space, uploading files using FTP, Virtual Hosting, access internet based website

Note: To attain the COs and competency, above listed Learning Outcomes (LOs) need to be undertaken to achieve the 'Application Level' of Bloom's 'Cognitive Domain Taxonomy'

9. SUGGESTED SPECIFICATION TABLE FOR QUESTION PAPER DESIGN

- Not Applicable-

10. SUGGESTED STUDENT ACTIVITIES

Other than the classroom and laboratory learning, following are the suggested student-related **co-curricular** activities which can be undertaken to accelerate the attainment of the various outcomes in this course:

- Prepare journals based on practical performed in laboratory.
- Browse and Observe features of different types of website.
- Identify different host servers for hosting static website.

11. SUGGESTED SPECIAL INSTRUCTIONAL STRATEGIES (if any)

These are sample strategies, which the teacher can use to accelerate the attainment of the various learning outcomes in this course:

- Massive open online courses (**MOOCs**) may be used to teach various topics/sub topics.
- '**L**' in item No. 4 does not mean only the traditional lecture method, but different types of teaching methods and media that are to be employed to develop the outcomes.
- About **15-20% of the topics/sub-topics** which is relatively simpler or descriptive in nature is to be given to the students for **self-directed learning** and assess the development of the LOs/COs through classroom presentations (see implementation guideline for details).
- With respect to item No.10, teachers need to ensure to create opportunities and provisions for **co-curricular activities**.
- Guide student(s) in undertaking micro-projects.
- Demonstrate students thoroughly before they start doing the practice.
- Encourage students to refer different websites to have deeper understanding of the subject.
- Observe continuously and monitor the performance of students in Lab.

The practical exercises as listed in point no. 6 above may be undertaken keeping in mind to develop a sample web site as final output. Some sample topics/domains are suggested below.

12. SUGGESTED MICRO-PROJECTS

Only one micro-project is planned to be undertaken by a student assigned to him/her in the beginning of the semester. S/he ought to submit it by the end of the semester to develop the industry oriented COs. Each micro-project should encompass two or more COs which are in fact, an integration of practicals, cognitive domain and affective domain LOs. The micro-project could be industry application based, internet-based, workshop-based, laboratory-based

or field-based. Each student will have to maintain dated work diary consisting of individual contribution in the project work and give a seminar presentation of it before submission. The total duration of the micro-project should not be less than **16 (sixteen) student engagement hours** during the course.

In the first four semesters, the micro-project could be group-based. However, in higher semesters, it should be individually undertaken to build up the skill and confidence in every student to become problem solver so that s/he contributes to the projects of the industry. A suggestive list is given here. Similar micro-projects could be added by the concerned faculty:
Create sample website with minimum ten web pages Containing text, images, colors & background, frames, tables, and CSS with suitable hyper linking.

- a. Website for Universities or Colleges.
- b. Web site for books shops, grocery store, others.
- c. Web site for any Vehicle Showroom.
- d. Website for Hospital facilities.
- e. Web site for Travel and Tourism Agency.
- f. Web site related to any Sports. (Ex. Cricket, Tennis,) Any other suggested topic by subject teacher.

13. SUGGESTED LEARNING RESOURCES

S. No.	Title of Book	Author	Publication
1.	HTML and XHTML – The complete reference	Powell, Thomas	Tata McGraw Hill, New Delhi, 2014, ISBN: 9780070701946
2.	Learning Web Design	Robbins	O'Reilly, London, 2012 ISBN 10:1-4493-1927-0
3.	Teach Yourself HTML & CSS in 24 Hours	SAMS	Pearson Education Publication, New Delhi, 2015, ISBN: 978-672336140
4.	HTML,XHTML and CSS	Bohem, Anne	Murach's Publication, New York, 2013, ISBN 13: 978-1890774578
5.	HTML 5 Black Book(second edition)	DT Editorial services	Dreamtech Publication, New Delhi, ISBN: 978-9350040959

14. SOFTWARE/LEARNING WEBSITES

- a. <http://www.w3schools.com/html>
- b. <http://www.html.net/>
- c. <http://www.2createawebsite.com>
- d. <http://webdesign.about.com>