

St. Xavier's College (Autonomous), Ahmedabad

Syllabus of Semester – II of the following departments under Faculty of Computer Science based on Undergraduate Curriculum Framework to be implemented from the Academic Year 2025-26.

DEPARTMENT OF COMPUTER SCIENCE

BSC-IT (Hons.) Category – IV

Minor Course – 1: Modern Web Design with HTML5 and CSS3

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credit Distribution of The Course			Eligibility Criteria	Pre-requisite(s) of the Course (if any)
	Lecture	Tutorial	Practical / Practice		
Modern Web Design with HTML5 and CSS3 ITMN221C	2	0	2	10 + 2 from a recognized board in any stream	NILL

Learning Objectives

This minor course is designed to:

- Understand the basic structure of an HTML document and use tags to format and organize web content.
- Apply multimedia elements like images, audio, and video effectively within HTML.
- Use CSS to style HTML elements through inline, internal, and external stylesheets.
- Utilize CSS selectors and properties to control text styling, layout, color, padding, margin, and borders.
- Implement advanced CSS techniques like animations, transitions, grid, and flexbox for dynamic, responsive design.

Learning Outcomes

At the end of the course the student will be able to:

- Create well-structured, organized, and formatted HTML documents.
- Use hyperlinks, lists, and tables to enhance navigation and present data effectively.
- Design visually appealing and responsive web pages using CSS for consistent styling.
- Utilize multimedia elements, CSS selectors, and styling techniques to improve user experience
- Apply advanced CSS techniques like grid, flexbox, animations, and transitions for dynamic layouts.

UNIT	Particulars	Hours
1	Basic HTML • Introduction • HTML document structure	15

- Adding text in newline(
</BR>)
- Creating heading (<h1></h1> to <h6></h6>).
- Creating a paragraph (<P>--</P>)
- Creating a horizontal ruler (<HR>--</HR>)
- Sub Script, Super Script, Text
- Alignment(<align>---</align>)
- Formatting Of text (, <U>, <I>)
- Font tag with all attributes
- Grouping of text (<Div>---</Div>, ---)
- Scrolling text<marquee>---</marquee> with its attributes)
- Working with Character entity / Special character Codes
- HTML Comments
- Order list
- Unordered list
- Definition list
- Working with Links: anchor tag with its entire attribute. To link documents with “target” attributes.
- Working with table:
- Creating table
- Specifying caption
- Table headings
- All table related Tags & attributes.(rowspan ,colspan

Advanced HTML

- Working with Images:
 - --- & all its Attributes
 - Creating Image maps (<map>---</map> & <area>---</area>) and their attributes
- Working with Forms:
 - Creating form(<form>--</form>) & all its attributes
 - Adding controls to an HTML form
 - <Input>---</input> tag and its all attribute
 - <text area>-----</text area>
 - Adding a selection control
 - Grouping the control of html forms(<Field set> and <legend> tags)
 - HTML5 form elements

Introduction to HTML5

- The <!DOCTYPE html> Element
- Introduction to new elements in HTML 5
- The Markup Elements using:
 - <section>
 - <article>
 - <aside>
 - <details>
 - <figcaption>
 - <figure>
 - <footer>
 - <header>
- The Media Elements
 - <audio>
 - <video>
 - <plug-ins>
- HTML Graphics:
 - The Canvas Elements
 - And SVG (Scalable Vector Graphics)

2	Write programs to implement • Basic HTML tags • Advanced HTML elements • HTML5 elements	30
3	CSS Basics • Introduction to CSS: • Understanding the concepts of CSS • Advantages and disadvantages • CSS syntax ◦ Grouping selectors and rulers • Selectors in CSS ◦ Using the class selectors ◦ Using the ID selectors ◦ Comparing ID and classes selectors • Using CSS comments • Types of Style sheets: ◦ External ◦ Internal ◦ Inline • CSS properties and text attributes: ◦ Color ◦ Alignment ◦ Decoration ◦ Transformation ◦ Indent ◦ Letter spacing and word spacing ◦ Whitespace ◦ Line-height ◦ Direction ▪ Unicode-bidi • CSS Padding ◦ Using padding properties ◦ Setting padding for all sides ◦ Setting padding for each side • List properties ◦ list-style-images ◦ list-style-position ◦ list-style-type ◦ list-style • CSS positioning ◦ Relative ◦ Absolute ◦ Fixed ◦ Z-index • CSS properties and table attributes Advance CSS • CSS rounded corners • Border images • CSS gradient • CSS shadow • CSS font & Text effects • CSS 2D & 3D Transform • CSS transition & Animations	15
4	Write programs to implement • CSS basics	30

- Advanced CSS

Textbook:

- Internet Technology and Web Design (First Edition-2011), Publisher: Tata McGraw Hill, By ISRD group
- HTML 5 in SIMPLE STEPS, Publisher: DREAMTECH PRESS, BY Kogent Learning Solutions Inc.
- Internet and HTML, Computer world publication

Reference Books:

- Internet and HTML, Computer world publication, World wide web Design with HTML(First Edition-2010), Tata McGraw Hill, By C Xavier
- Web Enabled commercial application development using HTML, Javascript, DHTML and php, BPB Publication, By Ivan Bayross

Sample Programs for Fundamentals of Web Development

1. Creating and saving simple HTML document. And opening in web browser
2. Modifying the background of HTML webpage (with colors & images)
3. Insert a line break in web page content. (use of
) using heading tags (<h1>.....<h6>)
4. Creating a paragraph (Using <p>-----</p>) using <hr> tag
5. Demonstrate use of subscript, super script, align tag, with different text formatting bold, italic, underline
6. Create web page which demonstrate the use of font tag
7. Create web page with <div> tag.
8. Create web page with tag.
9. Create web page with <blockquote> tag.
10. Create webpage using different attributes of body tag.
11. Demonstrate the use of Marquee tag. (including its all attributes)
12. Write HTML program to insert special characters and comment
13. Write HTML program to insert special characters in Chess board.
14. Write HTML program to create a simple order list.
15. Write HTML program to create a simple Unordered list.
16. Write HTML program to create definition list.
17. Write HTML program to create order list within Unordered list.
18. Write HTML program to create Unordered list within Unordered list.
19. Write HTML program to create order list within order list using Like fruits, vegetables, subjects etc.
20. Create any example according to you using all types of list with its attributes.
21. Write HTML program to create simple table with its border attribute.

22. Create Web page to Print BCA HTML Syllabus using table. Create Mark sheet, Electricity bill, telephone bill, time –table with use of Text formatting tags, back-ground color, and font.

23. Write HTML program to create complex table like

This is a paragraph about me, Ian! This is another paragraph about me, Ian!		Random Names	
		J. Doe	P. Day
		R. Bob	T. Sam
Free Software 1. Linux 2. Apache 3. MySQL 4. PHP		Contact me for details	
		HELLO	

24. Write HTML program to create three horizontal frames in single web page

25. Write HTML program to create three vertical frames in single web page

26. Write HTML program to create both horizontal & vertical frame in single web page

27. Write HTML program to demonstrate use of different LINK, ALINK and VLINK attributes of body tags

28. Create a webpage for online Jewellery shopping. Display Menu in left frame. Clicking on menu should display related webpage in right frame. Keep header and footer frames to display related information.

29. Create Web page to apply in job using filling form online.

30. Create a webpage with images, with audio and video.

31. Inserting Image on a web page (with all attributes).

32. Write HTML program in which make image as a link.

33. Write HTML program to e-mail registration form.

34. Write code for create images using canvas

35. Create a web page for user registration form. Assume related information and use appropriate control

36. Write HTML program which contains internal cascaded style sheet for p, h2, h3, body and font attribute.

37. Write HTML program which contains inline cascaded style sheet for text attributes.

38. Write HTML program which contains external cascaded style sheet for List properties user defined Classes and Id.

39. Write HTML program which contains all the CSS positioning properties through internal CSS using class selector.

40. Write HTML program using clip property & z-index property through external CSS.

41. Write HTML program which contains cascaded style sheet with margin attributes of style sheet.

42. Write HTML program which contains internal style sheet with background & border attributes of style sheet.

43. Write HTML program which contains external style sheet with CSS font & CSS text effects

44. Write HTML program which contains cascaded style sheet with CSS 2D & 3D Transform.

45. Write HTML program which contains external CSS using CSS transition & animations.