

**Guidelines of DSE Semester V/ Generic Elective Semester IV
(NEP UGCF 2022)**

**DSE/GE4b: Introduction to Web Programming
(Effective from Academic Year 2024 – 25)**

S. No.	Unit Name	Chapters	References	Hours
1.	Introduction	1 (Pg. HTML 1 – HTML 21) (Introduction, Exploring the Internet, Planning a website)	[1]	5
2.	HTML	1 (Pg. HTML 22 – HTML 25 (except using web Authoring tools), HTML 30 - HTML 37) 3 (Pg. HTML 83 – HTML 94, HTML 98 – HTML 122) (Introduction, Adding Images to a website, Exploring Div Elements, Adding Links to a webpage, Adding Lists) 8 (Pg. HTML 402 – HTML 416, HTML 423 – HTML 438) (Discovering Tables & Table style, Creating Webpage Forms)	[1]	12
3.	Cascading Style Sheet (CSS)	4 (Pg. HTML 143 – HTML 185) (Introduction, Using CSS, Inline Elements, Block Elements, External CSS, Linking CSS, Webpage layout, CSS for Structural Elements, Id Selectors, Class attributes)	[1]	8
4.	JavaScript	14, 15 (Pg. 343 – 350, 353(if statement), 356 (? operator), 357 – 361), 16 (Pg. 363 – 366), 17 (Pg. 385 – 390)	[2]	10
		9 (Pg.150 – 155, 156 – 157) (Java Scripts Events Handlers: onBlur, onClick, OnDbClick, onFocus, onKeyPress, onMouseOut, onMouseOver, onSelect, onSubmit)	[3]	
5.	jQuery and JSON	21 (Pg. 512 – 526, 530 – 538 before animation, 542 – 544)	[2]	8
		8 (Pg. 376 – 377)	[4]	2

Textbooks:

1. Minnick, J. Responsible *Web Design with HTML5 and CSS*, 9th edition (Hard Copy), Cengage Learning, 2017.
2. Nixon, R. Learning PHP, MySQL & JavaScript with jQuery, CSS and HTML5, 6th Edition, O'Reilly, 2021.
3. Ivan Bayross, *Web Enabled Commercial Application Development Using Html, Dhtml, Javascript, Perl CGI*, 4th Revised Edition, BPB Publications, 2010 (Reprint 2022).
4. Duckett, J. JavaScript and JQuery: Interactive Front-End Web Development, Wiley, 2014.

Practical List

HTML

1. Create an HTML document with following formatting – Bold, Italics, Underline, Colors, Headings, Title, Font and Font Width, Background, Paragraph, Line Breaks, Horizontal Line, marquee text.
2. Create an HTML document with Ordered and Unordered lists.
3. Create an HTML document demonstrating use of images in webpages (including images as logos, cell data in a table, background of a table, clickable icons, etc)
4. Create an HTML document to demonstrate Internal and External linking.
5. Create an HTML to display the following table:

Table Example

Seminar			
Day	Schedule		Topic
	Start Time	End Time	
Monday	8:00 AM	5:00 PM	Introduction to HTML
			Important HTML Tags
Tuesday	8:00 AM	11:00 AM	CSS-1
	11:00 AM	2:00 PM	
	2:00 PM	5:00 PM	JavaScript-1
Wednesday	8:00 AM	12 Noon	JavaScript-2
Thursday	8:00 AM	12 Noon	JQuery
	1:00 PM	3:00 PM	Valedictory

6. Create an HTML page demonstrating the following semantic tags:
 - a. Header
 - b. Nav
 - c. Main
 - d. Section
 - e. Footer
 - f. Details
 - g. Summary
 - h. Figure
 - i. Figure caption
7. Create a student registration form using HTML which has the following controls:
 - a. Text Box
 - b. Text Area
 - c. Dropdown box
 - d. Option/radio buttons
 - e. Check boxes
 - f. Reset and Submit buttonOn pressing the Submit button, a message “Form submitted” should be displayed.

CSS

1. Create a webpage for your department with a drop-down navigation menu for faculty, courses, activities, etc. Implement the webpage using styles, rules, selectors, ID, class.
2. Add appropriate CSS code to change the text, list, div element and table properties of the HTML questions above.

Javascript

1. Write a Javascript code to accept a number from the user through the prompt and print its multiplication table.
2. Create a HTML form having two text boxes and 4 buttons (as shown below) .

First Number

Second Number

Write a Javascript code to implement respective operation when a user clicks on a button. The result of the operation is to be displayed on an alert window.

3. Write a Javascript code to change the background color of a text box when text box gets focus.
4. Write a Javascript code for Q7 (of HTML above) to input and validate all data. Create functions to perform validation of each element, for example:
 - a. Roll number is a 7-digit numeric value.
 - b. Name should be an alphabetical value (String).
 - c. Non-empty fields like DOB.

jQuery and JSON

1. Change text color and contents using button click events using jQuery.
2. Select elements using ID, class, elements name, attribute name.
3. Write a JQuery function to test whether a date is a weekend.
4. Demonstrate various events: blur, change, focus, click, dblClick, submit.
5. Write a jQuery code that demonstrates the mouseOver and mouseOut event.
 - a. The web page should have a hyperlink labeled “It shows the mouse events” and linked to your college website.
 - b. When the mouse is hovered over the link the background color of webpage changes to green and link text is changed to “I’m green now”.
 - c. When the mouse is taken away from the link the background color of webpage changes to red and the link text changes to “I’m red now”.