

## Guidelines of Discipline Specific Elective Semester V

(NEP UGCF 2022)

### DSE: Web Design and Development (Effective from Academic Year 2024 – 25)

S. No.	Unit Name	Chapters	References	Hours
1.	<b>Unit 1. Introduction</b> Introduction to internet and web design. Basic concepts of web architecture	Ch-1	[2]	2
2.	<b>Unit 2. HTML</b> Introduction to hypertext mark-up language (HTML), creating web pages, lists, elements of HTML, hyperlinks, tables, forms, inserting images.	Ch-2 Ch-3 Ch-4 Ch-5 Ch-6 Ch-10 till pg 180	[2]	11
3.	<b>Unit 3. Basics of Javascript</b> Document object model, data types and variables, functions, methods, and events, controlling program flow, client-side form validation	Ch-8 Ch-9	[2]	12
4.	<b>Unit 4. Introduction to PHP</b> Basic syntax, defining variables and constants, data types, operators and expression, decision making statements, loop constructs, functions.	Ch-1 Ch-3 Ch-4 till pg.90 Ch-5 till pg. 103 Ch-6 till pg.129	[1]	8
5.	<b>Unit 5. Handling HTML Form with PHP</b> Connecting an HTML form with PHP, submitting data to the server using GET and POST methods, GET vs POST methods.	Ch- 12	[1]	6
6.	<b>Unit 6. Database Connectivity</b> Connectivity with database, database creation, creating tables, insertion and retrieval of the data from the database, data manipulation	Ch-10	[3]	6

#### Textbooks:

1. Nixon, R. **Learning PHP, MySQL & JavaScript A Step-by-Step Guide to Creating Dynamic Websites**, 6<sup>th</sup> edition, 2021, O'Reilly.
2. Ivan Bayross, **Web Enabled Commercial Application Development Using Html, Javascript, DHTML and PHP**, 4<sup>th</sup> Revised Edition, 2010, BPB Publications.
3. Holzner S. **PHP: The Complete Reference**, 2017, McGraw Hill.

#### Additional References:

1. Powell, T.A. (2017). **HTML & CSS: The Complete Reference**. 5th edition, 2017, Tata McGrawHill.

2. Duckett, J. **JavaScript and JQuery: Interactive Front-End Web Development**, 2014, Wiley.
3. Murach J., **Murach's PHP and MySQL**, 2nd Edition, 2014, Mike Murach & Associates.

## **Suggested Practical List:**

### **HTML**

1. Create an HTML document with following formatting – Bold, Italics, Underline, Colors, Headings, Title, Font and Font Width, Background, Paragraph, Line Brakes, Horizontal Line, Marquee text.
2. Create an HTML document with Ordered and Unordered lists, Images, Internal and External linking.
3. Create an HTML document for displaying the current semester's timetable.
4. Create a Student Registration Form (for taking inputs like Roll Number, First Name, Last Name, Gender, Department, DOB) using HTML, which has the following controls:
  - a. Text Box
  - b. Dropdown box
  - c. Option/radio button
  - d. Check boxes
  - e. Reset and Submit button.

### **JavaScript**

1. Write event-driven programs in JavaScript for the following:
  - a. Enter a number and on click of a button print its factors.
  - b. Print the smallest of five numbers entered by the user.
  - c. Find the factorial of a number entered by the user.
  - d. Take a number in an input text box, on click of a button, display its multiplication table.
2. Use the Student Registration Form created above and add functions to perform the following checks:
  - a. Student id is a 10-digit alphanumeric value
  - b. Name should be an alphabetical value (String)
  - c. Non-empty fields like Age
3. Create a form containing various HTML elements and perform appropriate validations on each of them while submitting the form.

### **PHP**

1. Write a PHP script to print the sum of even digits of a number.
2. Write a script in PHP to display a Multiplication Table.
3. Design a Student Registration form, using appropriate input fields consisting of following:
  - a. Roll Number
  - b. First Name
  - c. Last Name
  - d. Gender
  - e. Department
  - f. DOB

Submit and retrieve the form data using the \$\_POST variable and display it.

4. Write PHP Code to create a database, connect to it, create tables, insert and access their contents.

5. Write PHP code to insert, delete, and retrieve data from the database. Create proper forms for performing the above operations. Display the messages such as “The record is added in the database!” when data is inserted into the database, “A record is deleted from the database” when data is deleted from the database. Use appropriate button names such as Add Data, Delete Data, and Display Data.