Subject Code	Subject Name	Credits
26CS003	WEB TECHNOLOGY	4

Course Objectives

1. Foundational Knowledge of web technologies
2. Client-side scripting mastery
3. Server-side programming proficiency.
4. Introduce concept of PHP programming
5. Database interaction and debugging.

Learning Outcomes

After the completion of the course, the graduate will be able to

1. Students will be able to describe the basic components of HTML, CSS, and XML, including their purposes and applications in web development.
2. Develop client-side scripts using JavaScript to add interactivity to web pages.
3. Develop server-side applications using PHP, handling form data, processing strings, and managing files and directories.
4. Design and implement dynamic web applications using PHP and MySQL, including creating, updating, and deleting database records.
5. Develop strategies for debugging web applications, managing errors, and optimizing code for better performance.

Unit 1 - HTML Introduction (12 Hrs.)

HTML - Introduction - HTML Formatting - Hyper-Links - Lists - Tables - Images - Forms - Frames - Cascading Style sheets - Types - XML - Document type definition - XML Schemas - Document Object model

Unit 2 - Client-Side Scripting with JavaScript and AJAX (12 Hrs.)

Introduction to Client-Side scripting - JavaScript - Control statements - Functions - Arrays - Objects - Events - Dynamic HTML with Java Script - AJAX: Ajax Client Server Architecture - XML Http Request Object - Call Back Methods

Unit 3 - PHP Programming Fundamentals (12 Hrs)

PHP - Basic Syntax - Defining variable and constant - PHP Data types - Operator and Expression - Operator Precedence - Decisions and Loop - Functions & Recursion - String Processing and Regular Expressions - Form Processing - Working with file and Directories - Cookies.

Unit 4 - Object-Oriented Programming in PHP (12 Hrs)

PHP- Object Oriented programming – Classes/Objects - Constructor – Destructor – Access Modifiers - Inheritance – Constants – Abstract Classes – Interface – Traits – Namespaces – Iterables.

Unit 5 - Debugging and Database Integration with MySQL (12 Hrs.)

Debugging - Controlling Where Errors Appear - Fixing Parse Errors - Inspecting Program Data - Handling Uncaught Exceptions - Using MySQL Databases - Connecting to MySQL - Persistent Connections - Fetching Data - Inserting - Updating and Deleting Data.

References:

1. Jeffrey C. Jackson, “Web Technologies: A Computer Science Perspective”,Pearson Education, 2006.
2. Paul J. Deitel, Harvey M. Deitel, Abbey Deitel, “Internet & World Wide Web How to Program”, Fifth Edition, Deitel Series, 2012.