CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibilit ycriteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Front End Web Design and Development	2	0	0	2	12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:
- To introduce the basic concepts and techniques of client-side web programming.
- To enable the students to develop simple, interactive, and stylish websites using HTML, CSS and JavaScript.

Learning outcomes

The Learning Outcomes of this course are as follows:
- After studying this course, students will be able to build websites using the elementsof HTML.
- After studying this course, students will be able to build interactive and stylish websites using the client side programming techniques with CSS and Javascript.
- After studying this course, students will be able to learn to validate client-side data.
- After studying this course, students will be able to define the structure and contentsof the website using different features of CSS.

SYLLABUS

Unit 1 (3 weeks)
Introduction: Introduction to internet and web design. Basic concepts of web architecture.

Unit 2 (4 weeks)
HTML: Introduction to hypertext mark-up language (html), creating web pages, lists, hyperlinks, tables, web forms, inserting images, frames.
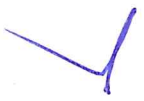
Unit 3 (4 weeks)

Cascading style sheet (CSS): Concept of CSS, creating style sheet, Importing style sheets, CSS properties, CSS styling (background, text format, controlling fonts), CSS rules, Style Types, CSS Selectors, CSS cascade, working with block elements and objects, working with lists and tables, CSS id and class, box model (introduction, border properties, padding properties, margin properties).

Unit 4 (4 weeks)

Basics of Javascript: Document object model, data types and variables, functions, methods and events, controlling program flow, built-in objects and operators, validations.

Practical Exercises (15 weeks)

HTML

- ☐ Create an HTML document with following formatting – Bold, Italics, Underline, Colors, Headings, Title, Font and Font Width, Background, Paragraph, Line Brakes, Horizontal Line, Blinking text as well as marquee text.
- ☐ Create an HTML document with Ordered and Unordered lists, Inserting Images, Internal and External linking
- ☐ Create an HTML document for displaying the current semester's timetable.
- ☐ Create a website with horizontal and vertical frames. Top horizontal frame needs to show your college's name and logo. Bottom horizontal frame is to be split into two vertical frames. The left frame has hyperlinks to pages related to faculty, courses, student activities, etc. The right frame shows the corresponding webpage based on the link clicked on the left frame.
- ☐ Create a student registration form using HTML which has the following controls and make an interactive content presentation using CSS.:
  I.   Text Box   II.   Dropdown box   III.   Option/radio buttons

  IV.   Check boxes   V.   Reset and Submit button

- ☐ Create a webpage for your department with a drop-down navigation menu for faculty, courses, activities, etc.. Implement the webpage using styles, rules, selectors etc. learned in CSS
- ☐ Write event-driven programs in JavaScript for the following:
  - Enter a number and on click of a button print its multiplication table.
  - Print the largest of three numbers entered by the user.
  - Find the factorial of a number entered by the user.
  - Enter a list of positive numbers using the prompt terminated by a zero. Find the sum and average of these numbers.

- ☐ Create a student registration form using text, radio button, check box, drop down box, text field and all other required HTML elements. Customize the CSS and javascript to input and validate all data. Create functions to perform validation of each element, example:

  a. Roll number is a 7-digit numeric value
  b. Name should be an alphabetical value (String)
  c. Non-empty and valid fields like DOB

57

Essential/recommended readings

- Nixon, R., Learning PHP, MySQL & JavaScript with jQuery, CSS and HTML5,O'Reilly, 2018.
- Powell, T.A. HTML & CSS: The Complete Reference, 5th edition, TataMcGrawHill, 2017.
- Duckett, J., JavaScript and JQuery: Interactive Front-End Web Development,Wiley, 2014.

Suggested Readings

- Boehm, A., & Ruvalcaba, Z., Murach's HTML5 and CCS, 4th edition, Mike Murach & Associates, 2018.
- Ivan Bayross, Web Enabled Commercial Application Development Using Html, Dhtml, Javascript, Perl CGI, BPB Publications, 2010.

Examination scheme and mode:

Total Marks: 100
Internal Assessment: 25 marks
Practical Exam (Internal): 25 marks
End Semester University Exam: 50 marks
The Internal Assessment for the course may include Class participation, Assignments, Class tests, Projects, Field Work, Presentations, amongst others as decided by the faculty.

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.