

Branch Name:	Computer Engineering
Semester/Year:	Semester V/ Third Year
Subject Title:	Web Application and Development
Subject Code:	1ET1030504
Pre-requisite:	Fundamentals of Programming and Networking

Course Objective:

- To understand working of internet and websites.
- To study programming for web application development.
- To analyze and design web user interface with browser compatibility.
- To understand working of data connectivity on server side programming.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
03	-	02	04	70	30	30	20	150

Subject Contents			
Sr. No	Topic	Total Hours	Weightage (%)
1	Introduction: Concept of WWW, Internet and WWW, HTTP Protocol : Request and Response, Web browser and Web servers, Features of Web 2.0	02	5
2	Web Design: Concepts of effective web design, Web design issues including Browser, Bandwidth and Cache, Display resolution, Look and Feel of the Website, Page Layout and linking, User centric design, Sitemap, Planning and publishing website, Designing effective navigation	06	10
3	HTML: Basics of HTML, formatting and fonts, commenting code, color, hyperlink, lists, tables, images, forms, XHTML, Meta tags, Character entities, frames and frame sets, iframe, Browser architecture and Web site structure. Overview and features of HTML5	03	10
4	Style sheets: Need for CSS, introduction to CSS, basic syntax and structure, using CSS, background images, colors and properties, manipulating texts, using fonts, borders and boxes, margins, padding lists, positioning using CSS, CSS2, Overview and features of CSS3	06	15
5	JavaScript: Client side scripting with JavaScript, variables, functions, conditions, loops and repetition, Pop up boxes, Advance JavaScript: JavaScript and objects, JavaScript own objects, the DOM and web browser environments, Manipulation using DOM, forms and validations, DHTML	06	15

	Combining HTML, CSS and JavaScript, Events and buttons		
6	JQuery: Fundamentals of JQuery, JQuery With HTML	04	10
7	PHP: Introduction and basic syntax of PHP, decision and looping with examples, PHP and HTML, Arrays, Functions, Browser control and detection, string, Form processing, Files, Advance Features: Cookies and Sessions, Object Oriented Programming with PHP	04	15
8	PHP and MySQL: Basic commands with PHP examples, Connection to server, creating database, selecting a database, listing database, listing table names, creating a table, inserting data, altering tables, queries, deleting database, deleting data and tables, PHP myadmin and database bugs	05	10
9	Bootstrap: Introduction to Bootstrap, Bootstrap Grid System concept	03	10

Course Outcome:

After learning the course, the students will be able to understand the working of website and internet. Using programming skill of HTML, Java Script, JQuery, PHP and MySql, Bootstrap Students will be able to develop a user interactive websites. The students will able to design of web pages according to client requirement and manage the content as improve the readability.

List of Reference Books:

- 1 Head First HTML with CSS & XHTML, by Elisabeth Freeman and Eric Freeman
- 2 HTML 5, Black Book, dreamtech Press
- 3 Internet and World Wide Web How to program, P.J. Deitel & H.M. Deitel, Pearson
- 4 Web Technologies, Black Book, dreamtech Press
- 5 Web Design, Joel Sklar, Cengage Learning
- 6 Developing Web Applications in PHP and AJAX, Harwani, McGrawHill
- 7 The Web Designer's 101 Most Important Decisions Professional Secrets for a Winning Website, Scott Parker, Paperback
- 8 Beginning Web Programming with Html, XHTML and CSS, Jon Duckett

List of Suggested titles of Experiments:

1. Design HTML page to display following irregular table with required HTML tags and attributes.

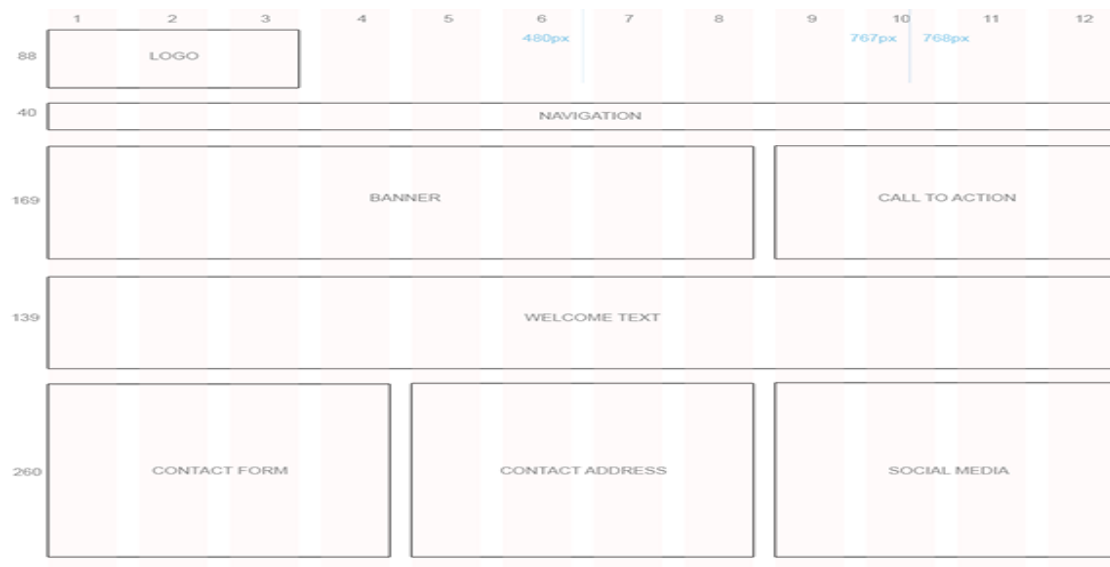
A	B	D	E			F
	C		G	H	I	O
J					P	
N						
K			L	M		

- Add Basic HTML tags like Heading Tags, Paragraph Tag, Line Break Tag, Center Tag, Horizontal Lines
- Add Core HTML Attributes like id, title, class, style
- Add frequently useful HTML Tags and Attributes like Image Tag, List Tags, Font Tag, Marquee Tag, Link Tags, Color Attributes, Alignment Attributes

2. Design a web page to use CSS to control the style and layout tag <div> for given template.

<header>	
<navigation>	
<section>	<aside>
<article>	
<footer>	

- Use <iframe> tag to check section based on navigation selection
 - Modify to use external CSS file
3. Design HTML form with java script to perform following task:
- a. To show “You Clicked Me” message when a user clicks on button “Click Me”.
 - b. Takes Integer number as input and tells whether the number is ODD or EVEN.
 - c. Takes two real numbers as input and perform arithmetic’s operation chosen by user from list of radio button.
4. Design HTML form with java script for registration purpose with following constraints:
- Name accepts only alphabet character
 - Mobile Number with exactly 10 character
 - Email Id in valid format
 - Display hint on mouse over the textbox
5. Enhance the experiment 4 to store and display the registration detail from database.
- Display all information on next page
 - Store all information after confirmation
 - Use session in case of edit information on back to first page
6. Set background color of an element when the element (or any elements inside it) gets focus or Loses focus.
7. Design a web page in PHP which allows user to upload file with following restrictions.
- Only “pdf” and “jpeg” file can be uploaded.
 - File size should not exceed 1000KB.
- If upload is successful then it should display all details of the file like its name, size and type otherwise it display invalid message as above requirements.
8. Write a PHP script for reading the content from text file and displaying data in tabular form.
9. Design following Responsive Web layout using Bootstrap.



e-Resources (If any):

1. <http://nptel.ac.in/courses/106105084/>
2. <https://technicalsagar.in/web-technology/>
3. <https://www.w3schools.com>
4. <https://www.geeksforgeeks.org/web-technology/>