Semester - IV

Subject Name: Web Technology

Subject Code: 09CE0404

Objective: The increasing use of Internet and WWW encourages everyone to use web-based solutions for their requirements. Web technology refers to the methods by which End-user devices like computers/mobiles communicate with each other. This communication involves the use of web publishing languages like HTML, CSS and JavaScript. This subject will attempt to give you a basic understanding of various aspects of HTML, CSS and JavaScript.

Credits Earned: 6 Credits

Course Outcomes: End of this course will help to understand following aspects.

- To understand and compare the fundamentals of Web hosting and domain name services.
- To understand various non-browser specific web design principles.
- To understand the need and be able to develop HTML/XHTML and CSS pages with valid structure as well as content.
- To understand and be able to develop JavaScript/jQuery code to access the DOM structure of web document and object properties.
- To understand and be able to develop a complete website using Bootstrap 4.0

Pre-requisite of course: Programming Fundamentals

Teaching and Examination Scheme

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE	IA	CSE	Viva	Term work	
0	0	6	6	00	30	20	25	25	100

Contents:

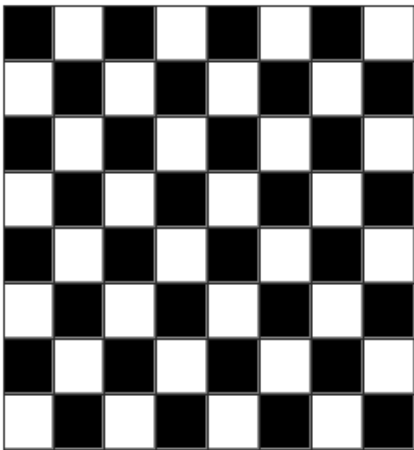| Unit	Topics	Contact Hours
1	**Introduction and Web Design:** Introduction to Internet, WWW and Web 2.0, Web protocols and Web servers, Web Design Principles and Web site structure	4
2	**HTML and CSS:** Basics of HTML, HTML Tags and attributes, Character entities, divs, XHTML Basics of CSS, Gradients, Shadow Effects, transformations, animations, Positioning systems of CSS	16
3	**JavaScript and jQuery:** Basics of JavaScript, JavaScript syntaxes for variables, functions, branches and repetitions. JavaScript alert, prompt and confirm. Objects in JavaScript, forms and validations, JavaScript events Basics of jQuery, jQuery syntaxes, jQuery selectors, events, effects	20
4	**PHP:** Introduction to PHP, Variable, Constant, Data types, Operators: arithmetic, logical, assignment, bitwise, Loop: while, do…while, for, break statements, Flow control statements: simple if, if-else, else-if clause, switch statements, PHP Array: Indexed Array, Associative Array	26
5	**Function and Data inputs:** Defining function, calling function, retrieving value from function, date and time function, math function, string function, data inputs through form controls	12
6	**PHP & Database:** Basics of MySQL, database connectivity, insertion of data, retrieving data, updating of data, deletion of data	6
	Total Hours	**84**

References:

1. Bruce Lawson, Remy Sharp, "Introducing Html5", Pearson Education, second edition
2. Steven Holzner, "PHP: The Complete Reference", McGraw-Hill Osborne
3. Ralph Moseley and M. T. Savaliya, Developing Web Applications, Wiley-India
4. Julie C. Meloni, "Teach yourself PHP, Mysql and Apache All in One", Pearson Education

List of Experiments:

Sr. No.	Unit No.	Name of Topics	Contact Hours
1	2	Write a code for creating static page design using division tag.	3
2	2	Write a code for design menu system using list tag.	3
3	2	Design Linked in page using HTML5.	3
4	3	Write a code to create a form using JavaScript validation.	3
5	3	Write a code to create a pop up welcome message using event in JavaScript.	3
6	4	Create a PHP script to find maximum number from given number.	3
7	4	Create a PHP script to print Fibonacci series of given number.	3
8	4	Create a PHP script to print current date and time.	2
9	4	Write a PHP script to get the client IP address.	2
10	4	Create a PHP script which demonstrate arithmetic and assignment operators.	6
11	4	Create a PHP script which accepts data from user using HTML form controls and display this data to new PHP page.	3
12	4	Write a PHP script to display source code of a webpage.	3
13	4	Write a PHP script to sort the following associative array. array("Sophia"=>"31","Jacob"=>"41","William"=>"39","Ramesh"=>"40") in a) Ascending order sort by value b) Ascending order sort by Key c) Descending order sorting by Value d) Descending order sorting by Key	6
14	4	Create a script to construct the following pattern, using nested for loop. * * * * * * * * * * * * * * *	6

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15	4	Write a PHP script to generate unique random numbers within a range.	2
16	4	Write a PHP script using nested for loop that creates a chess board as shown below. 	6
17	5	Write a function to reverse a string.	2
18	5	Write a function to check a number is prime or not.	2
19	5	Write a PHP function that checks whether a passed string is a palindrome or not?	2
20	6	Create a PHP script to connect with database.	2
21	6	Create a PHP script to retrieve data from existing database.	2
22	All	Develop a mini project which covers entire syllabus.	14

Instructional Method:

a) The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, also need to use ICT tools and facilities.

b) The internal evaluation will be done on the basis of continuous evaluation of students in the laboratory and class-room.

c) Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

Supplementary Resources:

Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.

a) http://nptel.ac.in

b) http://www.w3schools.com/

c) http://getbootstrap.com/