INSTITUTE	DIPLOMA STUDIES
PROGRAM	DIPLOMA ENGINEERING (COMPUTER ENGINEERING)
SEMESTER	4
COURSE TITLE	WEB TECHNOLOGY
COURSE CODE	09CE2404
COURSE CREDITS	3

Objective:

1 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.

Course Outcomes: After completion of this course, student will be able to:

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

Pre-requisite of course: Programming Fundamentals

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	6	0	30	20	25	25

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	0
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	0
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	0

Contents : Unit	Topics	Contact Hours
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	0
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	0
6	**PHP & Database:** Basics of MySQL, database connectivity, insertion of data, retrieving data, updating of data, deletion of data	0
Total Hours		**0**

Suggested List of Experiments:

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, 1. Write a code to create your resume using HTML., 2. Write a code to design a menu system., 3. Create multiple pages in HTML and link them with the menu system created in experiment 2., 4. Write a code to create a page and set layout using various techniques.	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, 5. Write JavaScript Program to Add Two Numbers, 6. Write JavaScript Program to Check if a number is Positive, Negative, or Zero, 7. Write a JavaScript Code to learn about different events of JavaScript., 8. Write a JavaScript code to change the HTML content., 9. Write a JavaScript code to change the HTML Attribute., 10. Write a JavaScript code to change the CSS style., 11. Write a JavaScript code to hide/show HTML elements., 12. JavaScript Code to understand various types of alerts in JavaScript.	20

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
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, 13. Create a PHP script to find maximum number from given number., 14. Write a PHP script to get the client IP address.	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, 15. Write a PHP code to display formatted output using PHP and HTML to create dynamic pages., 16. Write a PHP code to understand concept of GET and POST method., 17. Write a PHP code to design basic calculator.	12
6	**PHP & Database:** Basics of MySQL, database connectivity, insertion of data, retrieving data, updating of data, deletion of data, 18. Write a PHP code to understand the concept of Session., 19. Write a PHP code to connect with the database., 20. Write a PHP code to insert the data into a database when user submits a form., 21. Write a PHP code to delete the data from database., 22. Write a PHP code to update the data of a row in a table., 23. Develop a mini project with the help of HTML, CSS, JavaScript, PHP and Database.	6
Total Hours		**84**

References:

1 Introducing Html5, Introducing Html5, Bruce Lawson, Remy Sharp, Pearson Education, 2011

2 PHP: The Complete Reference, PHP: The Complete Reference, Steven Holzner, McGraw-Hill Osborne, 2008

3 Developing Web Applications, Developing Web Applications, Ralph Moseley and M. T. Savaliya, Wiley-India, 2013

4 Teach yourself PHP, Mysql and Apache All in One, Teach yourself PHP, Mysql and Apache All in One, Julie C. Meloni, Pearson Education, 2003

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation

Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking
40.00	40.00	10.00	10.00		

Instructional Method:

1 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.

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

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

Supplementary Resources:

1 http://nptel.ac.in

2 http://www.w3schools.com/

3 http://getbootstrap.com/