

<b>COURSE TITLE</b>	<b>INTERNET AND WEB TECHNOLOGY</b>
<b>COURSE CODE</b>	<b>01CT0408</b>
<b>COURSE CREDITS</b>	<b>4</b>

**Objective:**

- 1 To acquire knowledge and skills for creation of web site considering both client and server-side programming. To gain ability to develop responsive web applications. Increasing use of Internet and web encourage everyone to use web solution. Web technology is the bridge between end-user devices like computer/mobile communication with each other. To create dynamic web site and web portal it involves the use of web language like HTML, CSS, JavaScript and PHP with advance framework. This subject will attempt to give you a basic understanding of various aspects of web technologies.

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

- 1 Understand basis functioning of Internet by studying its architecture.
- 2 Apply different types of style sheets and their properties
- 3 Apply client side and server-side scripting techniques as per requirements
- 4 Analyze design pattern-based approaches and frameworks of PHP.
- 5 Create dynamic web-based solution based on user requirements.

**Pre-requisite of course:** Programming Fundamentals

**Teaching and Examination Scheme**

<b>Theory Hours</b>	<b>Tutorial Hours</b>	<b>Practical Hours</b>	<b>ESE</b>	<b>IA</b>	<b>CSE</b>	<b>Viva</b>	<b>Term Work</b>
3	0	2	50	30	20	25	25

<b>Contents : Unit</b>	<b>Topics</b>	<b>Contact Hours</b>
1	<b>Internet Basics</b> Introduction, Concept of Internet- History of Internet, Protocols of Internet, World Wide Web, URL, Web Server, Web Browser, Internet Connectivity, Internet Network, Services on internet, Current Trends on Internet, Concept of WWW, HTTP Response and Request, Features of Web 2.0	5
2	<b>HTML and CSS</b> Basics of HTML, HTML tags and attributes, Meta tags, Character entities, hyperlink, table, lists, images, forms, divs, XHTML, Browser Architecture and website structure, Overview and features of HTML 5, Need for CSS, basic syntax and structure, background images, colors and properties, manipulating texts, fonts, borders and boxes, margin, padding, lists, positioning using CSS, Gradients, Shadow effects, transformation, transition and animations, etc. CSS flex, media queries. Overview of CSS, CSS2 and features of CSS3	10

<b>Contents : Unit</b>	<b>Topics</b>	<b>Contact Hours</b>
3	<b>Java Script</b> 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: Combining HTML, CSS and JavaScript, Events and buttons Introduction to jQuery, jQuery syntax, selectors, events, effects, jQuery HTML, Access / Manipulate web browser elements using jQuery.	11
4	<b>XML</b> Introduction to XML, uses of XML, simple XML, XML key components, DTD and Schemas, Using XML with application. Transforming XML using XSL and XSLT	3
5	<b>PHP</b> 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	4
6	<b>PHP and MySQL</b> 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 my admin and database bugs	5
7	<b>Latest Trends in PHP</b> Overview of Laravel, Laravel Application Structure, Introduction to WordPress, WordPress Dashboard, Overview of Joomla, Joomla Architecture, Application of Joomla	4
<b>Total Hours</b>		<b>42</b>

#### Suggested List of Experiments:

<b>Contents : Unit</b>	<b>Topics</b>	<b>Contact Hours</b>
1	<b>Experiment 1</b> Design wireframe for your semester project based on web design principles	2
2	<b>Experiment 2</b> Create table using HTML tags.	2
3	<b>Experiment 3</b> Formatting web pages with CSS [Create semester project website's inner pages]	2
4	<b>Experiment 4</b> Formatting web pages with CSS [Create semester project website's inner pages]	2

**Suggested List of Experiments:**

<b>Contents : Unit</b>	<b>Topics</b>	<b>Contact Hours</b>
5	<b>Experiment 5</b> Create Home Page for any Website which contains image slider, header and footer and navigation menu bar.	2
6	<b>Experiment 6</b> Browser interaction and form validation (Web browser environments, forms and validation, image sliders) [Image slider plugins of jQuery, Client-side validation of Registration & Login page to be created in semester project website].	2
7	<b>Experiment 7</b> Use the on double bracket method to attach a click event handler to all forward slash p backwad slash elements using jQuery.	2
8	<b>Experiment 8</b> Choose the correct conditional (ternary) operator to alert "Too young" if age is less than 18, otherwise alert "Old enough" using JavaScript.	2
9	<b>Experiment 9</b> Design and Implement Tic-Tac-Toe game using HTML, CSS and JavaScript.	2
10	<b>Experiment 10</b> Introduction to PHP (Starting to script on server side, Arrays, function, validations) [Server-side validations for Registration and Login of semester project website]	2
11	<b>Experiment 11</b> Advance PHP (Management of session and cookies) [Implement Admin login/logout functionality and cookie wherever required]	2
12	<b>Experiment 12</b> Create PHP Form which demonstrate Insert, Update, Delete and Select operation with database. (Take required data from user).	2
13	<b>Experiment 13</b> PHP with mysql connectivity (Forms, Advance PHP and database handling) [Semester Project]	2
14	<b>Experiment 14</b> PHP framework (Use framework in Management Portal for semester project website)	2
<b>Total Hours</b>		<b>28</b>

**Textbook :**

- 1 Developing Web Applications,, Ralph Moseley and M.T. Savaliya, Second Edition, Wiley-India, 2013

**References:**

- 1 Black Book - HTML 5, Black Book - HTML 5, Kogent Learning Solutions Inc, Dreamtech Press, 2011

### References:

- 2 Black Book - Web Technologies, Black Book - Web Technologies, Kogent Learning Solutions Inc, Dreamtech Press, 2009
- 3 Developing Web Applications, Ralph Moseley and M.T. Savaliya, Second Edition, Wiley-India
- 4 jQuery Cookbook, Cody Lindley, O'Reilly Media
- 5 Head First jQuery – A Brain- Friendly Guide, Ryan Benedetti, Roman Cranley, O' Reilly Media

### 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					
Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
5.00	25.00	30.00	20.00	10.00	10.00

### Instructional Method:

- 1 The course delivery method will depend upon the requirement of content and need of the students. The teacher in addition to conventional teaching method (Chalk and Talk) may use any of the tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc. for effective teaching.
- 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 the semester for evaluation of performance of students in laboratory.
- 4 Students may use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory, etc.

### Supplementary Resources:

- 1 <http://nptel.ac.in>
- 2 <http://www.w3schools.com>
- 3 <http://getbootstrap.com/>
- 4 <http://www.tutorialspoint.com/>
- 5 <https://www.phptpoint.com/>
- 6 <https://www.codeigniter.com/>