Subject Code: 01CT0408

Subject Name: Internet and Web Technology

B. Tech. Year – II (Semester IV)

Objective:
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.

Credits Earned: 04 Credits

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:

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial / Practical Marks		Total Marks
				E	I		V	T	
Theory	Tutorial	Practical		ESE	IA	CSE	Viva	Term Work	
03	00	02	04	50	30	20	25	25	150

Contents:

Unit	Topics	Hours
1	**Internet Basics** 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	05
2	**HTML and CSS** 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
3	**Java Script** 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	**XML** Introduction to XML, uses of XML, simple XML, XML key components, DTD and Schemas, Using XML with application. Transforming XML using XSL and XSLT	03
5	**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
6	**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 my admin and database bugs	05
7	**Latest Trends in PHP** Overview of Laravel, Laravel Application Structure, Overview of CodeIgniter, CodeIgniter Application Structure, Introduction to WordPress, WordPress	04

	Dashboard, Overview of Joomla, Joomla Architecture, Application of Joomla	
	Total Hours	42

Suggested Text books / Reference books:

1. Black Book - HTML 5, DT Editorial Services, Second Edition, Dreamtech Press
2. Black Book - Web Technologies, DT Editorial Services, Dreamtech Press
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 per 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	Understand	Apply	Analyze	Evaluate	Create
5%	25%	30%	20%	10%	10%

Suggested List of Experiments:

1. Design wireframe for your semester project based on web design principles
2. Create table using HTML tags.
3. Design Online Quiz Web Page using HTML tag and elements.
4. Formatting web pages with CSS [Create semester project website's inner pages]
5. Create Home Page for any Website which contains image slider, header and footer and navigation menu bar.
6. 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].
7. Use the on () method to attach a click event handler to all <p> elements using jQuery.
8. Choose the correct conditional (ternary) operator to alert "Too young" if age is less than 18, otherwise alert "Old enough" using JavaScript.
9. Design and Implement Tic-Tac-Toe game using HTML, CSS and JavaScript.
10. Introduction to PHP (Starting to script on server side, Arrays, function, validations) [Server-side validations for Registration and Login of semester project website]
11. Advance PHP (Management of session and cookies) [Implement Admin login/logout functionality and cookie wherever required]
12. Create PHP Form which demonstrate Insert, Update, Delete and Select operation with database. (Take required data from user).

13. PHP with mysql connectivity (Forms, Advance PHP and database handling) [Semester Project]
14. PHP framework (Use framework in Management Portal for semester project website]

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/