Course Code CSE4001	Internet and Web Programming	CT C LTP 4
Prerequisite:	Programming in Java	

Objectives:

- To understand the basic concepts of web programming and internet.
- To understand internet protocols.
- To understand how the client-server model of Internet programming works.
- Learn the use of scripting languages and appreciate their limitations.
- To understand interactive web applications.

Expected Outcomes:

After successfully completing the course the student should be able to

- Differentiate web protocols and web architecture.
- Implement client side script using Javascript.
- Implement server side script using PHP
- Develop XML based web applications
- Developing web applications using Perl
- Develop application using recent environment like Node JS, Angular JS, JSON and AJAX.

Student Outcomes (SO): **b, c, e, i, l**

Unit No	Unit Content	No. of hours	SOs
1	**Introduction to Web System** Internet Overview- WWW - Web Protocols - Web Browsers and Web Servers - Web System Architecture – URL - Domain Name – Client and Server-side Scripting.	9	b, c
2	**HTML and CSS** HTML5 Basics – Formatting – Colors – Images – Links – Tables – Lists – Layout–Forms–Canvas–Media. CSS3 Basics – Selectors - Box Model - Backgrounds and Borders -Text Effects – Advanced Features.	9	b, c
3	**Java Script and JQuery** JavaScript Basics –Functions – Arrays – DOM - Built-in Objects -Regular Expression - Event handling – Validation – JSON Basics– JQuery Basics - plugins.	9	b, c, l
4	**XML and AJAX** **PL/SQL:** Declaring PL/SQL Variables, Writing Executable Statements, Using SQL Statements Within a PL/SQL XML Basics – Parser – DOM – XPath – XSL/XSLT – XQuery – DTD – Schema – Namespaces. AJAX Basics – Request and Response- AJAX using XML- AJAX using Java Script and JQuery.	9	l
5	**PHP and MYSQL** PHP Basics – Arrays - Functions– Form Handling - File handling – Date and Time – MYSQL Basics - PHP and MYSQL Database Connectivity- Session - Cookies, E-mail – PHP and XML –PHP and AJAX.	7	e

	Total Lecture:	**45**

Mode of Teaching and Learning: Flipped Class Room, One Lecture to be videotaped, Digital/Computer based models to augment lecture for practice/tutorial, 2 hours lectures by industry experts on contemporary topics

Mode of Evaluation and assessment:

The assessment and evaluation components may consist of unannounced open book examinations, quizzes, student's portfolio generation and assessment, and any other innovative assessment practices followed by faculty, in addition to the Continuous Assessment Tests and Final Examinations.

Text Books:

1.	Thomas Powell, HTML and CSS, Complete Reference, Fifth Edition, Mc Graw Hill, 2010
2.	Thomas Powell, Fritz Schneider , JavaScript The complete reference, Mc Graw Hill, 2013
3.	Tom Christiansen, Nathan Torkington, Perl Cookbook, O'Reilly, 2012
4.	David Powers, PHP Solutions, Dynamic web page design made easy, Apress, 2010
5.	Joe Fawcett, Danny Ayers, Liam R. E. Quin, Beginning XML, 5th Edition, Wrox, 2012

Reference Books:

1.	Paul Dietel, Harvey Dietel and Abbey Dietel, Internet and World Wide Web How to program, 5th International Edition, Pearson, 2012

Recommendation by the Board of Studies on	
Approval by Academic council on	
Compiled by	

No.	Description of Experiment	SO
1	Analyze the existing IRCTC website and improve the website using HTML	c,i
2	Design an English alphabet chart such that on clicking the alphabet the appropriate example must be displayed using HTML client-side image mapping	c,i
3	Design the online periodic table as follows using CSS 	c,i
4	Validate the ISBN number of a given book using regular expressions.	c,i
5	Develop tic-tac-toe game using JavaScript.	c,i
6	Develop an online application to find the transpose of the given matrix. Obtain the number elements from the user based on the number of rows and columns using JavaScript.	c,i

7	Create a hospital registration form and validate the fields using JavaScript.	c,i
8	Develop a shopping cart application using PHP sessions.	c,i
9	Develop an online quiz application using PHP where the questions and answers are maintained in database.	c,i
10	Maintain student details using XML and validate their order using Schema. Let the first name and last name of the student be grouped. The registration number is an attribute of student element. The root element is student_details. Student is a complex element that has department, address and phone number. Apply a restriction on the phone number such that is in the format of XXX-XXXX where x is an integer.	c,i
11	Perform the following using PERL: (a) Create an array with 10 elements (b) Print the highest index of the array (c) Assign beyond the end of the array, to an element at index 20 (d) Save the current highest index in a scalar, and print it. (e) Set the array size to 5 elements (index 4) (f) Print the array (g) Set the array size back to the previous size (using the scalar created in (d)). (h) Print the array	c,i