CSE3002	INTERNET AND WEB PROGRAMMING	L	T	P	J	C
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Pre-requisite	CSE2004-Database Management System	Syllabus version
		v1.0

Course Objectives:

1. To comprehend and analyze the basic concepts of web programming and internet protocols.
2. To describe how the client-server model of Internet programming works.
3. To demonstrates the uses of scripting languages and their limitations.

Expected Course Outcome:

After successfully completing the course the student should be able to

1. Differentiate web protocols and web architecture.
2. Apply JavaScript, HTML and CSS effectively to create interactive and dynamic websites.
3. Implement client side scripting using JavaScript.
4. Develop applications using Java.
5. Implement server side script using PHP, JSP and Servlets.
6. Develop XML based web applications.
7. Develop application using recent environment like Node JS, Angular JS, JSON and AJAX.

Student Learning Outcomes (SLO): 2, 5, 6, 17

2. Having a clear understanding of the subject related concepts and of contemporary issues.
5. Having design thinking capability
6. Having an ability to design a component or a product applying all the relevant standards and with realistic constraints
17. Having an ability to use techniques, skills and modern engineering tools necessary for engineering practice

Module:1	INTRODUCTION TO INTERNET	2 hours

Internet Overview- Networks - Web Protocols — Web Organization and Addressing - Web Browsers and Web Servers -Security and Vulnerability-Web System Architecture – URL - Domain Name – Client-side and server-side scripting.

Module:2	WEB DESIGNING	4 hours

HTML5 – Form elements, Input types and Media elements, CSS3 - Selectors, Box Model, Backgrounds and Borders, Text Effects, Animations, Multiple Column Layout, User Interface.

Module:3	CLIENT-SIDE PROCESSING AND SCRIPTING	7 hours

JavaScript Introduction –Functions – Arrays – DOM, Built-in Objects, Regular Expression, Exceptions, Event handling, Validation- AJAX - JQuery.

Module:4	SERVER SIDE PROCESSING AND SCRIPTING - PHP	5 hours

Introduction to PHP – Operators – Conditionals – Looping – Functions – Arrays- Date and Time Functions – String functions - File Handling - File Uploading – Email Basics - Email with attachments.

Module:5	PHP SESSION MANAGEMENT and DATABASE CONNECTIVITY	3 hours

Sessions-Cookies-MySQL Basics – Querying single and multiple MySQL Databases with PHP – PHP Data Objects.

Module:6	XML	4 hours

XML Basics – XSL, XSLT, XML Schema-JSON.

Module:7	**APPLICATION DEVELOPMENT USING NODE JS**	**4 hours**
Introduction to Node.js- Installing Node.js - Using Events, Listeners, Timers, and Callbacks in Node.js – Introduction to Mongo DB- Accessing MongoDB from Node.js.		
Module:8	**Industry Expert Talk**	**1 hour**
	Total Lecture hours:	**30 hours**

Text Book(s)	
1.	Paul Deitel, Harvey Deitel, Abbey Deitel, Internet & World Wide Web - How to Program, 5th edition, Pearson Education, 2012.
2.	Kogent Learning Solutions Inc, Web Technologies Black Book, Dream Tech press, 2013.
3.	Brad Dayley, Brendan Dayley, and Caleb Dayley , Node.js, MongoDB and Angular Web Development: The definitive guide to using the MEAN stack to build web applications, 2nd Edition, Pearson Education, 2018
Reference Books	
1.	Lindsay Bassett, Introduction to JavaScript Object Notation, 1st Edition, O'Reilly Media, 2015
2.	Fritz Schneider, Thomas Powell , JavaScript – The Complete Reference, 3rd Edition, Mc-Graw Hill, 2017
3.	Steven Holzener , PHP – The Complete Reference, 1st Edition, Mc-Graw Hill, 2017
4.	Sandeep Kumar Patel, Developing Responsive Web Applications with AJAX and JQuery, Packt Publications, 2014
Mode of Evaluation: CAT / Assignment / Quiz / FAT / Project / Seminar	

List of Challenging Experiments (Indicative)		
1.	HTML basic tags, HTML forms, table, list, HTML frames and CSS internal, external and inline	4 hours
2.	JavaScript validation, DOM and Ajax	6 hours
3.	Java, Servlet and JSP	8 hours
4.	PHP : Forms and File handling, Session Management and Cookies, Databases	8 hours
5.	XML	4 hours
	Total Laboratory Hours	30 hours
Mode of assessment: Project/Activity		

Recommended by Board of Studies	19-11-2018		
Approved by Academic Council	No. 53	Date	13-12-2018