Web Application Development

Course Code	19CS3603	Year	III	Semester	II
Course Category	Program Core	Branch	CSE	Course Type	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	JAVA
Continuous Internal Evaluation :	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes		
Upon successful completion of the course, the student will be able to		
CO1	Understand the fundamental concepts of web application development.	L2
CO2	Apply HTML, CSS and Java Script to create static and dynamic web pages.	L3
CO3	Apply JDBC API to interact with database.	L3
CO4	Apply the concepts of server side technologies for dynamic web applications.	L3

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3:Substantial, 2: Moderate, 1:Slight)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3													
CO2	3					1	1		2	2				
CO3	3					1	1						1	1
CO4	3					1	1						1	1

	Syllabus	
Unit No.	**Contents**	**Mapped CO**
I	**HTML:** Understanding 3-tier Web Architecture, Overview of HTTP, Introducing HTML document structure, Creating Headings on a web page, Working with links, Creating a Paragraph, Working with images, Working with tables, working with frames, Introduction to Forms and HTML controls. **Cascading Style Sheets:** Inline, Internal and External Style Sheets, Style class, Multiple styles.	**CO1, CO2**
II	**JavaScript:** Introducing DHTML, Introducing JavaScript, Client Side benefits of using JavaScript, Embedding JavaScript in an HTML page, Using Variables, Using Operators, Working with Control Flow statements, Working with functions, Handling Events, Using Arrays, Creating objects in JavaScript. **XML**: Introduction to XML: Syntax of XML, document structure, and document type definition.	**CO1, CO2**
III	**JDBC:** Java Database Connectivity: JDBC Connectivity, Types of JDBC drivers, Steps to write a JDBC application, JDBC Statements, Manipulations on the database.	**CO1, CO3**
IV	**Servlets:** Introduction to Servlets: Lifecycle of a servlet, the servlet api, the javax.servlet package, the javax.servlet.http package, handling http request & responses, Servlets with database connectivity. Introduction to Model View Controller (MVC): Architecture.	**CO1, CO4**
V	**JSP:** Introduction to JSP: The problem with servlet, the anatomy of a JSP page, JSP processing, JSP applications, JSP components, comments, expressions, scriptlets, JSP database connectivity	**CO1, CO4**

Learning Resources
Text Books
1. Web Technologies, Black Book, Kogent Learning Solutions Inc, Dreamtech Press. 2. Jason Hunter, William Crawford, Java Servlet Programming, Second edition, 2003, O'Reilly, 2003 3. Robert W.Sebesta, Programming the World Wide Web, Fourth edition, 2007, Pearson.
References
1. Internet and World Wide Web - How to program, Dietel and Nieto, 2006, PHI/Pearson Education. 2. JAVA The Complete References, Herbert Schildt, Eighth edition, 2014, McGraw Hill. 3. Web Technologies, Uttam K.Roy, 2004, Oxford Higher Education publication. 4. Web Warrior Guide to Web Programming, Bai Ekedaw, 2012, Thompson Publications.
e-Resources and other Digital Material
1. www.w3schools.com 2. Prof. I. Sengupta. (14th, May, 2017), Department of Computer Science & Engineering, I.I.T.,Kharagpur, "Internet Technologies", NPTEL videos.