Course No.	Course Name	L-T-P -Credits	Year of Introduction
CS368	Web Technologies	3-0-0-3	2015

Course Objectives

1. *To impart the design, development and implementation of Dynamic Web Pages.*
2. *To develop programs for Web using Scripting Languages.*
3. *To give an introduction to Data Interchange formats in Web.*

Syllabus

Basics of Internet and World Wide Web, HTML and XHTML, Cascading Style Sheets, Frameworks, Basics of JavaScript, JQuery, Introduction to XML and JSON, Overview of PHP

Expected Outcome

Student is able to

1. *Understand different components in web technology and to know about CGI and CMS.*
2. *Develop interactive Web pages using HTML/XHTML.*
3. *Present a professional document using Cascaded Style Sheets.*
4. *Construct websites for user interactions using JavaScript and JQuery.*
5. *Know the different information interchange formats like XML and JSON.*
6. *Develop Web applications using PHP.*

Text Books

1. Robert W Sebesta, Programming the World Wide Web, 7/e, Pearson Education Inc., 2014.
2. P. J. Deitel, H.M. Deitel, Internet &World Wide Web How To Program, 4/e, Pearson International Edition 2010.

References

1. Bob Boiko, Content Management Bible, 2nd Edition, Wiley Publishers. [Chapter 1, 2]
2. Matthew MacDonald, WordPress: The Missing Manual, 2nd Edition, O'Reilly Media. [Chapter 1]
3. Bear Bibeault and Yehuda Katz, jQuery in Action, Second Edition, Manning Publications.[Chapter 1]
4. Lindsay Bassett, Introduction to JavaScript Object Notation: A To-the-Point Guide to JSON 1st Edition, O'Reilly.[Chapter 1,2,3,4]
5. DreamTech, Web Technologies: HTML, JS, PHP, Java, JSP, ASP.NET, XML, AJAX,

Black Book, Kogent Learning Solutions Inc. 2009.

6. Chris Bates, Web Programming Building Internet Applications, 3/e, Wiley India Edition 2009.
7. Jeffrey C Jackson, Web Technologies A Computer Science Perspective, Pearson Education Inc. 2009.

Web Resources

1. www.w3.org/CGI/
2. old.tree.ro/en/strategy-white-papers/content-management-systems.pdf
3. httpd.apache.org/download.cgi
4. https://alistapart.com/article/frameworks
5. http://getbootstrap.com/css/
6. https://www.w3.org/TR/WD-DOM/introduction.html

Course Plan

Module	Contents	Hours	Sem. Exam Marks %
I	**Introduction to the Internet:** The World Wide Web, Web Browsers, Web Servers, Uniform Resource Locators, Multipurpose Internet Mail Extensions, The Hypertext Transfer Protocol. Common Gateway Interface(CGI), Content Management System – Basics *Case Study:* Apache Server, WordPress.	**06**	**15%**
II	**Introduction to HTML/XHTML :** Origins and Evolution of HTML and XHTML, Basic Syntax of HTML, Standard HTML Document Structure, Basic Text Markup, Images, Hypertext Links, Lists, Tables, Forms, HTML5, Syntactic Differences between HTML and XHTML.	**07**	**15%**
FIRST INTERNAL EXAM			
III	**Introduction to Styles sheets and Frameworks** **Cascading Style Sheets:** Levels of Style Sheets - Style Specification Formats, Selector Forms, Property-Value Forms, Font Properties, List Properties, Alignment of Text, Color, The Box Model, Background	**06**	**15%**

	Images, The span and div Tags. **Frameworks:** Overview and Basics of Responsive CSS Frameworks - Bootstrap.		
IV	**Introduction to JavaScript and jQuery** **The Basics of JavaScript:** Overview of JavaScript, Object Orientation and JavaScript, General Syntactic Characteristics- Primitives, Operations, and Expressions, Screen Output and Keyboard Input, Control Statements, Object Creation and Modification,Arrays, Functions. Callback Functions, Java Script HTML DOM. **Introduction to jQuery:** Overview and Basics.	**07**	**15%**
SECOND INTERNAL EXAMINATION			
V	**Introduction to Data Interchange Formats** **XML:** The Syntax of XML, XML Document Structure, Namespaces, XML Schemas, Displaying Raw XML Documents, Displaying XML Documents with CSS, XSLT Style Sheets, XML Applications. **JSON**(Basics Only): Overview, Syntax, Datatypes, Objects, Schema, Comparison with XML.	**08**	**20%**
VI	**Introduction to PHP**: Origins and Uses of PHP, Overview of PHP - General Syntactic Characteristics - Primitives, Operations, and Expressions - Control Statements, Arrays, Functions, Pattern Matching, Form Handling, Cookies, Session Tracking.	**08**	**20%**
END SEMESTER EXAM			

Assignment:

It is highly recommended to give assignment based on:

1. JavaScript Frameworks (like AngularJS or/and NodeJS)
2. Any PHP web app based on frameworks(like Laravel, CodeIgniter, CakePHP, Zend etc.)

Question Paper Pattern

1. There will be *five* parts in the question paper – A, B, C, D, E
2. Part A
   a. Total marks : 12
   b. *Four* questions each having 3 marks, uniformly covering modules I and II; All*four* questions have to be answered.
3. Part B
   a. Total marks : 18
   b. *Three* questions each having 9 marks, uniformly covering modules I and II; *Two* questions have to be answered. Each question can have a maximum of three subparts.
4. Part C
   a. Total marks : 12
   b. *Four* questions each having 3 marks, uniformly covering modules III and IV; All*four* questions have to be answered.
5. Part D
   a. Total marks : 18
   b. *Three* questions each having 9 marks, uniformly covering modules III and IV; *Two* questions have to be answered. Each question can have a maximum of three subparts
6. Part E
   a. Total Marks: 40
   b. *Six* questions each carrying 10 marks, uniformly covering modules V and VI; *four* questions have to be answered.
   c. A question can have a maximum of three sub-parts.