

COURSE HANDOUT

B. Tech (CSE& IT) – 4th Semester

Course Title	: Web Technologies	Dated: 28-11-2017
Course Code	: 16CS406	Academic Year : 2017-18
Course Structure	: 3-1-0-4 (L-T-P-C)	
Course Coordinator	: Mr. G. Veerraju	
Instructor(s)	: Dr. V. Sreerama Murthy, Mr. G. Veerraju, Ms. G. Neelima, Ms. Y. Divya Bharathi	
Pre-requisite	: Object Oriented Programming concepts, Java Programming, (SQL) Oracle, MySQL	

Scope and Objective:

Students undergoing this course are expected to:

1. Know the distinguishing characteristics of scripting languages
2. Create adaptive web pages
3. Use CSS to implement a variety of presentation effects in HTML documents
4. Impart the concept and implementation of cookies as well as related privacy concerns

At the end of the course, the students able to:

1. Write a valid HTML document involving a variety of element types - including hyperlinks - images - lists - tables - and forms
2. Implement server-Side Programming for creating information sharing and functionality using PHP
3. Apply JDBC and AJAX technologies in real time applications
4. Make use of servlets-and JSP Technologies in real time applications
5. Develop Server-Side Programming for creating information sharing and functionality using JSP
6. Create web applications by using data base and sever side scripting languages

TextBooks:

1. Web Technologies, Uttam Roy, OXFORD University press
2. Web programming with HTML, XHTML and CSS, 2e, Jon Duckett, Wiley India

Reference books:

1. Web programming Bai, Michael Ekedahl, CENAGE Learning , India edition.
2. An Introduction to Web Design + Programming, Paul S.Wang, India Edition

SYLLABUS:

Unit I

HTML Common tags- List, Tables, images, forms, Frames, Links and Navigation, **CSS:** Introduction, CSS Properties, Controlling Fonts, Text Formatting, Pseudo classes, Selectors,.

Java Script: Learning Java script: Variables, operators, Functions, Control structures, Events, Validations, plugins.

Introduction to HTML5, introduction to CSS3

13+4 Hours

Unit II

PHP Programming: Introducing PHP: Creating PHP script, Running PHP script. Working with Variables and constants: Using variables, Using constants, Data types, Operators.

Controlling program flow: Conditional statements, Control statements, Arrays, functions. Working With forms.

PHP 5 Global Variables – Superglobals - PHP 5 Cookies - PHP 5 Session **10+3 Hours**

Unit III

AJAX: Introduction, AJAX with XML

Servlets: introduction to servlets, Life cycle of servlets, JSDK, The servlet API, the javax.servlet package, Reading servlet parameters and initialization parameters, The javax.servlet HTTP package, Handling Http request and responses, Using cookie, session tracking.

Introduction to JSP: The problem with servlet, the anatomy of JSP page, JSP processing, JSP application design with MVC, Tomcat server and testing tomcat, Generic dynamic content, using scripting elements implicit JSP objects.

Servlets in Net Beans-Servlets in Eclipse-Servlet filter: Authentication filter-Filter Config **11+4 Hours**

Unit IV

JSP application development: Conditional processing display values using an expression to set an attribute, Declaring variables and methods, sharing data between JSP pages, Requests and users passing control and data between pages, Sharing sessions and application data, memory usage considerations.

JDBC connectivity in JSP: Data base programming using JDBC, Studying javax.sql.* package, Accessing a database from a JSP page, Application specific database actions, Deploying JAVA beans in JSP page.

JSP Custom tags-Custom tag API-Custom URI **11+4 Hours**

Total: 45+15 Hours

Course Plan:

No. Lecture	Learning Objectives	Topic(s) to be Covered	Chapter in the Textbook/Reference
Unit-1			
1.	To learn HTML Common Tags	Introduction to Web Technologies, HTML Common tags	T2
2.	To learn Concepts of Web Technologies,	List, Tables, images	T2

3.	To learn the designing forms and frames in a web page	forms, Frames	T2
4.	To know linking pages and navigating through pages	Links and Navigation	T2
Tutorial No. 1			
5.	To impart knowledge on Cascading Style Sheets	CSS: Introduction	T2
6.	To learn various concepts in CSS like properties, fonts and text formatting	CSS Properties, Controlling Fonts, Text Formatting	T2
7.	To impart knowledge on pseudo classes, selectors and CSS3 version	Pseudo classes, Selectors, introduction to CSS3	T2
Tutorial No. 2			
Java Script			
8.	To understand the Concept of Scripting language and need	Learning Java script: Variables,	T2
9.	To implement the concept of operators and functions in Java Script	operators, Functions	T2
10.	To implement Control Structures in Java Script	Control structures	T2
Tutorial No. 3			
11.	To learn and implement events	Events	T2
12.	Validating html pages	Validations	T2
13.	To impart knowledge on need of plugins	plugins	T2
Tutorial No. 4			
Unit-2			
PHP Programming			
14.	To impart knowledge on server scripting languages (Hypertext Preprocessing)	Introducing PHP	T1
15.	Writing a PHPscript	Creating PHP script	T1
16.	Running a PHP Script	Running PHP script	T1
17.	Working with Variables and constants	Using variables, Using constants	T1
18.	Working with data types and operators in PHP	Data types, Operators	T1
Tutorial No. 5			
19.	To impart knowledge on usage of Conditional statements in PHP	Conditional statements	T1
20.	To impart knowledge on usage of Control statements in PHP	Control statements	T1
21.	To impart knowledge on usage of arrays in PHP	Arrays	T1
Tutorial No. 6			
22.	To impart knowledge on usage of functions in PHP	functions	T1

23.	To impart knowledge on usage of forms in PHP	Working Withforms	T1
Tutorial No. 7			
Unit-3			
Ajax			
24.	To understand Web development technique Ajax Programming	AJAX: Introduction	T2
25.	To implement the Ajax with XML	AJAX with XML	T2
Tutorial No. 8			
Servlets			
26.	To implement knowledge on Server side programming	Servlets: introduction to servlets, Life cycle of servlets, JSDK, The servlet API	T2
27.	To know the concept of packages for servlet programming and on reading and initializing parameters in servlets	the javax.servlet package,Reading servlet parameters and initialization parameters	T2
Tutorial No. 9			
28.	To know the concept of packages for servlet programming and handling request, response objects	The javax.servlet HTTP package, Handling Http request and responses	T2
29.	To impart knowledge on cookies in servlets	Using cookie	T2
30.	To understand session tracking in servlets	session tracking	T2
Tutorial No. 10			
Introduction to JSP			
31.	To learn the concept of creating dynamic web pages (Java Server Pages)	:The problem with servlet, the anatomy of JSP page,	T2
32.	To impart knowledge on JSP working and architecture	JSP processing ,JSP applicationdesign with MVC	T2
33.	To impart knowledge on generic dynamic contents in JSP	Generic dynamic content	T2
34.	To know the usage and working of scripting elements, implicit JSP objects	using scripting elements, implicit JSP objects	T2
Tutorial No. 11			
Unit-4			
JSP application development			
35.	To learn JSP application development	Conditional processing display values using an expression to set an attribute	T2
36.	To implement sharing of data between JSP pages	sharing data between JSP pages	T2
37.	To learn JSP application development	Requests and users passing control and data between pages	T2
Tutorial No. 12			

38.	To implement sharing of data between JSP pages	Sharing sessions and application data	T2
39.	To impart knowledge on memory usage considerations in JSP pages	memory usage considerations	T2
JDBC connectivity in JSP			
40.	To impart knowledge on Java Database Connectivity	Data base programming using JDBC	T1
Tutorial No. 13			
41.	To impart Knowledge on javax.sql.* package	Studying javax.sql.* package	T1
42.	To impart knowledge on accessing database from JSP page	Accessing a database from a JSP page	T1
Tutorial No. 14			
43.	To learn and implement database actions	Application specific database actions	T1
44.	To learn and implement java beans in JSP page	Deploying java beans in JSP page	T1
45.	To learn and implement java beans in JSP page	Deploying java beans in JSP page	T1
Tutorial No. 15			

Evaluation Scheme:

Component	Duration (minutes)	Marks	% of weightage	Date & Time	Venue
Internal Test – 1	90	30	80%*Best +20%*Rest	29.01.2018 to 3.02.2018 3:15-04:45 P.M	Block-5
Internal Test – 2	90			26.3.2018 to 31.3.2018 3:15-04:45 P.M	Block-5
Comprehensive Test	60	10	10%	9.4.2018 to 14.4.2018	Block-5
Comprehensive Exam	180	60	60%	23.4.2018 to 5.5.2018	Block-5

Chamber Consultation Hour: 4.00PM

Venue : CSE Staff Room

Notices: CSE Main Notice Board

Dr. V. Sreerama Murthy, Mr. G. Veerraju,

Ms. G. Neelima, Ms. Y. Divya Bharathi

Signature of the Instructors

Mr. G. Veerraju

Signature of the Course-Coordinator