

## WEB PROGRAMMING

(Common to CSE & IT)

<b>Course Code : 15CT1118</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>

### Pre-requisites:

Object Oriented Programming through JAVA

### Course Outcomes:

At the end of the Course, the Student will be able to:

- CO 1** Describe and explain the relationship among HTML, XHTML, CSS, JavaScript, XML and other web technologies.
- CO 2** Create and publish advanced HTML pages with the help of frames, scripting languages, and CSS.
- CO 3** Understand and use JavaScript variables, control structures, functions, arrays, and objects. Understand and develop XML Technologies such as XML Schemas, XSLT.
- CO 4** Understand and develop Server-Side Programming using Servlets and JSP's.
- CO 5** Develop web pages using AJAX and PHP.

### UNIT-I

(10 Lectures)

#### INTRODUCTION TO HTML5:

New HTML5 Form input Types, Introduction to Cascading Style Sheets: Part 1: Inline Styles, Embedded Style Sheets, Conflicting Styles, and Linking External Style Sheets (Text Book: 1)

#### JAVA SCRIPT:

Introduction to scripting, Control Structures-I, Control Structures-II, Functions, Arrays, Objects. (Text Book: 1).

**UNIT-II****(10 Lectures)****XML:**

Introduction, XML Basics, Structuring Data, XML Namespaces, Document Type Definitions (DTDs), W3C XML Schema Documents, XML Vocabularies, Extensible Style sheet Language and XSL Transformations, Document Object Model (DOM): Objects and Collections (Text Book : 1).

**UNIT-III****(10 Lectures)****JDBC AND SERVLETS: DATABASE ACCESS:**

Overview of JDBC, JDBC Drivers, Connecting to a Database, theStatement Interfaces, Result Sets, Using Metadata (Text Book: 3)

**SERVLETS:**

The Life Cycle of a Servlet, Using Tomcat for Servlet Development, A Simple Servlet, The Servlet API, The javax.servlet Package , Reading Servlet Parameters, The javax.servlet.http Package, Handling HTTP Requests and Responses, Cookies, Session Tracking. (Text Book : 2).

**UNIT-IV****(10 Lectures)****JSP:**

JSP Overview, How JSP Works , A Basic Example, JSP Syntax and Semantics: The JSP Development Model, Components of a JSP Page: Directives, Comments, Expressions, Scriptlets, Declarations, implicit objects, Standard Actions, Tag Extensions, A Complete Example (Text Book: 3).

Expressions, Scriptlets, Expression and Scriptlet Handling by the JSP Container, Implicit Objects and the JSP Environment, Initialization Parameters, Request Dispatching: Anatomy of Request Processing, include Directive, The <jsp:include> Action, Forwarding Requests, RequestDispatcherObject (Text Book:3).

**UNIT-V****(10 Lectures)****PHP:**

Introduction, Simple PHP Program, Converting Between Data Types, Arithmetic Operators, Initializing and Manipulating Arrays, String

Comparisons, String Processing with Regular Expressions, Form Processing and Business Logic, Reading from a Database  
(Text Book: 1)

AJAX: Traditional Web Applications vs. Ajax Applications, Rich Internet Applications (RIAs) with Ajax, History of Ajax, Ajax Example Using the XML, HttpRequest Object, Using XML and the DOM.  
(Reference Book: 6)

### **TEXT BOOKS:**

1. Dietel and Dietel : “Internet and World Wide Web – How to Program”, 5<sup>th</sup> Edition, PHI/Pearson Education, 2011
2. Herbert Schildt, “The complete Reference Java 2”, 9<sup>th</sup> Edition, TMH, 2014.
3. Phil Hanna: “The Complete Reference JSP”, 2<sup>nd</sup> Edition, TMH, 2008.

### **REFERENCES:**

1. Hans Bergsten : “Java Server Pages”, 3<sup>rd</sup> Edition, O’Reilly publication, 2008.
2. Raj Kamal, “Internet & Web technologies”, 8<sup>th</sup> Edition, Tata McGraw-Hill, 2007.
3. Chris Bates, “Web Programming, building internet applications”, 2<sup>nd</sup> Edition, WILEY, Dreamtech, 2008.
4. Xavier. C, “Web technology and design”, 1<sup>st</sup> Edition, New Age International, 2011.
5. Marty Hall and Larry Brown, “Core servlets and java Server pages volume 1: core technologies”, 2<sup>nd</sup> Edition, Pearson Education, 2007.
6. Thomas A Powel, “The Complete Reference: AJAX”, 1<sup>st</sup> Edition, Tata McGraw Hill, 2008.