



No:-

Date:

CS020601: Web Technology

L-T-P-Cr: 3-0-2-4

Pre-requisites: Object Oriented Programming

Course Objectives:

- To impart knowledge of fundamental and advanced Java programming concepts.
- To make students understand the concept of web and web architectures.
- To impart ability to design and implement dynamic, responsive web pages.
- To make students design and implement WEB Application projects.

Course Outcomes:

At the end of the course, a student should:

Sl. No	Outcome	Mapping to PO
1.	Recall basic OOP concepts and the corresponding JAVA features	PO2, PO3
2.	Explain Advanced Java Concepts such as: Synchronization, Database Connectivity, Event Handling	PO2, PO3
3.	Designing Dynamic and Responsive web pages	PO2, PO3, PO4, PO6, PO12
4.	Experiment with Swings framework in JAVA for solving real life problems.	PO2, PO3, PO4 PO6, PO12
5.	Building WEB application using JSP, Servlets	PO2, PO3, PO4 PO6, PO12

UNIT I: Web Introduction:

Lectures: 5

Domain name, IP Address concepts, World Wide Web

HTML5 & CSS3 : Introduction to HTML5, Tags, Forms, Data validation, Canvas, SVG, audio, Video, Cascading Style sheet 3(CSS3).

UNIT II: JavaScript:

Lectures: 6

JavaScript : Introduction, data types, variables, operators, Array Objects, Date Objects, String Objects, Document Object Model, Image Object, Event Handling, Browser Object, Window Object, Location Object, History Object, Submit event and data validation.

Dynamic Hypertext markup language (DHTML): Introduction to DHTML, Dragging and Dropping data, working layers

UNIT III: jQuery

Lectures: 6

jQuery: jQuery Introduction, jQuery Install, jQuery Syntax, jQuery Selectors, jQuery Event Methods, jQuery Effects -Hide and Show, jQuery Effects –Fading, jQuery Effects –Sliding, jQuery Effects –Animation, jQuery Stop Animations, jQuery Callback Functions, jQuery –Chaining, jQuery -Get Content and Attributes, jQuery -Set Content and Attributes, jQuery -Add Elements, jQuery -Remove Elements, jQuery -Get and Set CSS Classes, jQuery -css() Method, jQuery –**AJAX**Introduction, jQuery -AJAXload() Method, jQuery -AJAXget() and post() Methods, **JSON**

UNIT IV: Graphics in Java

Lectures: 8

Graphics in Java: Swings and Event Handling in Java, GUI creation using Swings, Event delegation Model,.

Database Programming: JDBC API.

UNIT V: Socket Programming using Java

Lectures: 5

Sockets, TCP Sockets, UDP Sockets, Java RMI

UNIT VI: Servlets

Lectures: 6

Servlet Architecture, Servlet Life Cycle, Generic Servlet, HTTP Servlet, Cookies, Filters, Session management

UNIT VII: Java Server Pages (JSP)

Lectures: 6

JSP and Servlet, JSP Syntax, JSP Components, JSTL, Session Tracking.

Text/ Reference Book:

- 1) Patrick Naghton & H. Schildt – *The Complete Reference Java 2*, Tata McGraw Hill Publication, New Delhi.
- 2) Uttam K. Roy *Advanced Java Programming*, Oxford University Press, New Delhi
- 3) Thomas A. Powell- *HTML & CSS: The Complete Reference*, TMH, New Delhi
- 4) Balagurusamy -*Programming in Java*, 2nd Edition; Tata McGraw Hill Publication; New Delhi.
- 5) Dietel, Dietel - *Java How to program*, 7th edition; Pearson Education, New Delhi.
- 6) *Core Servlets and Java Server Pages*, Vol.1: Core technologies, 2nd Edition, Pearson Education, New Delhi.
- 7) Ryan Benedetti, Ronan Cranley- *Head First jQuery-A Brain-Friendly Guide*, O'Reilly Media
- 8) Matthew David- *HTML5*, O'Reilly Media