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***CS3403 Web Technology***

**L-T-P-Cr: 3-0-0-3**

**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:

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| Sl. No | Outcome | Mapping to PO |
|  | Recall basic OOP concepts and the corresponding JAVA features | PO2, PO3 |
|  | Explain Advanced Java Concepts such as: Synchronization, Database Connectivity, Event Handling | PO2, PO3 |
|  | Designing Dynamic and Responsive web pages | PO2, PO3,PO4,PO6,PO12 |
|  | Experiment with Swings framework in JAVA for solving real life problems. | PO2,PO3, PO4 PO6, PO12 |
|  | 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 –**AJAXIntroduction**,jQuery -AJAXload() Method,jQuery -AJAXget() and post() Methods, **JSON**

**UNIT IV: Graphics in Java Lectures: 8**

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

**Database Programming:** JDBC API.

**UNIT V: Socket Programming using Java Lectures: 5**

Sockets, TCP Sckets, UDP Sockets, Jav RMI

**UNIT VI: Servlets Lectures: 6**

Servlet Architecture, Servlet Life Cycle, Generic Servet, 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. ThomasA. 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