



**BIT 253**

## **WEB TECHNOLOGIES**

### **Course Objectives:**

1. To design and develop web pages using html5, CSS positioning, Servlets and JDBC.
2. Understanding and writing a well-formed XML schemas and documents.
3. Using JSP as view component in MVC based web applications.
4. Understanding .NET architecture and writing applications with ADO.NET

### **UNIT-I**

**Introduction:** Web Fundamentals, **HTML 5.0:** basic tags, Form elements and attributes.

**Introduction to Cascading Style Sheets:** CSS selectors, CSS BOX Model, CSS Positioning, and CSS floating.

**JQuery:** Introduction to JavaScript, Selecting elements in the documents, Event handling, working with styles, The Event object, Using and creating plugins, JSON Fundamentals.

Web-Based and REST Style Services:

### **UNIT-II**

**Introduction to XML:** The Syntax of XML, XML Document Structure, Document Type Definitions, Name Space, XML Schemas, Displaying raw XML Documents, Displaying XML Documents with CSS, XSLT Style Sheets and XML Processors.

### **UNIT-III**

**Java Servlets:** Servlet Life Cycle, Basic Servlet Structure, request methods, passing initialization parameters from web.xml, Handling the client request form data, Generating HTTP Response, Request dispatching and State Management techniques.

**Java Server Pages:** Expressions, Scripting elements, Page Directives, Actions, JSP Objects, Handling Exceptions, MVC Flow of Control, Accessing Ms Access, My SQL and Oracle databases using Servlets and JSP.

### **UNIT-IV**

**Web Services:** Definition, Web services Architecture, Simple Object Access Protocol (SOAP) - goals, structure and contents of a SOAP Message, processing a SOAP message, Web Services Description language (WSDL) - Structure of WSDL interface, Implications of WSDL Model, Universal description discovery and integration (UDDI) - Goals, Information in a UDDI registry, UDDI data structures, UDDI Registry API.

## UNIT-V

**ASP.NET:** Web Form fundamentals, Web Controls, State management, Building better web form - Validation, rich controls, user controls and graphics, Data Management with ADO.NET, ASP.NET with Ajax.

### **Suggested Reading:**

1. Robert W. Sebesta, "Programming with World Wide Web", Eighth Edition, Pearson Education, 2008.
2. John Pollak, "jQuery - A Beginners Guide", McGraw Hill Education, 2014.
3. Phil Hanna, "The Complete Reference JSP", First Edition, Tata McGraw-Hill, 2003.
4. Gustavo Alonso, "Web Services: Concepts, Architectures and Applications" Springer Science & Business Media, 2004
5. Matthew MacDonald, "Beginning ASP.NET 4.5 in C#", Illustrated, A press, 2012.
6. James Webber, Savas Parastatidis, Ivan Robinson, "Rest in Practice: Hyper Medid and System Architecture", First Edition, O'REILLY, 2010.