

With effect from the Academic Year 2021-22
VASAVI COLLEGE OF ENGINEERING(Autonomous)
IBRAHIMBAGH, HYDERABAD – 500 031

Department of Computer Science & Engineering
WEB PROGRAMMING & SERVICES

SYLLABUS FOR B.E. V-SEMESTER

L:T:P (Hrs./week): 3:0:0	SEE Marks : 60	Course Code: U19PC530CS
Credits : 3	CIE Marks : 40	Duration of SEE : 3 Hours

COURSE OBJECTIVES	COURSE OUTCOMES <i>On completion of the course, students will be able to</i>
1 Develop web applications using technologies like HTML, XML, JavaScript, Servlet, JSP & PHP.	1 Apply HTML, CSS & JavaScript to design web pages.
2 Develop and publish web services.	2 Develop applications using JDBC API to connect to a database. Design XML documents and apply styles using XSLT.
	3 Explain architectural styles and develop dynamic web applications using Servlets.
	4 Design and develop server side programs using JSP & PHP.
	5 Publish web services and explain serverless computing.

UNIT-I:

Web Basics and Overview: Evolution of the Internet and World Wide Web, Web Basics, Introduction to HTML5, HTML5 Validation Service, Forms, HTML5 Form input Types, Cascading Style Sheets (Part-1).

JavaScript: Introduction to Scripting Functions, Arrays, Objects.

UNIT-II:

XML: XML Basics, XML Document Structure, XML Namespaces, XSL Transformations.

Working with JDBC 4.0: JDBC Drivers, JDBC Processes with java.sql package: Types of Statements, Retrieving Meta information from Database and ResultSet.

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JDBC Processes with javax.sql package: JDBC Data Sources, Connection Pooling, Working with Transactions.

UNIT-III:

JavaEE Platform: Enterprise Architecture Types, JavaEE7 Architecture, Micro services Architecture

Working with Servlet 3.1: Java Servlet API, Servlet Life Cycle, Servlet Implementation, Request and Response Scope.

Handling Sessions: Approaches to Session Tracking, Session Tracking with Java Servlet API.

UNIT-IV:

JSP: Introduction to JSP, Architecture, JSP Lifecycle, JSP Elements: Directives, Scripting Elements, Action Tags, JSP Expression Language.

JSP Tag Extensions: Tag Extensions, Tag Extension API, Writing Tag Handlers.

PHP: Introduction, Conversion between Data Types, Arithmetic Operators, Manipulating Arrays, String Processing, Form Processing and Business Logic, Reading from Database, Using Cookies.

UNIT-V:

Web Services: Web Services Technologies - SOAP, REST, JSON, Web Services Architecture, Publishing and Consuming SOAP-Based WCF Web Service, Publishing and Consuming REST-Based XML Web Service, Publishing and Consuming REST- Based JSON Web Service. Web RTC

Serverless Computing: AWS services, AWS Lambda, Use-Cases, Web application Deployment in Cloud.

Learning Resources:

1. Paul J. Deitel, Harvey M. Deitel, Abbey Deitel, Internet & World Wide Web How to Program, 5th Edition, Pearson Education.
2. David R. Heffelfinger, Java EE 8 Application Development, Packt Publishers, 2017
3. Java Server Programming Java EE7 (J2EE 1.7): Black Book, (2014), Dreamtech Press.
4. Uttam K. Roy, Web Technologies, (2012), Oxford Publishers.
5. Robert W. Sebesta, Programming the World Wide Web, 7th Edition (2014), Pearson Education.
6. <https://www.w3schools.com/html/>
7. <https://javaee.github.io/tutorial/toc.html>
8. <https://www.javatpoint.com/php-tutorial>
9. <https://docs.microsoft.com/en-us/aspnet/web-forms/index>
10. <https://aws.amazon.com/lambda/>