

B.E VI-Sem (R-23) 2025-26

With effect from Academic Year 2025-26 (R-23)

VASAVI COLLEGE OF ENGINEERING (Autonomous)
IBRAHIMBAGH, HYDERABAD – 500 031
DEPARTMENT OF INFORMATION TECHNOLOGY

WEB APPLICATION DEVELOPMENT AND SECURITY

(GENERAL TRACK : OPEN ELECTIVE-IV)

(Common for CIVIL, ECE, EEE & MECH)

SYLLABUS FOR B.E VI- SEMESTER

L:T:P(Hrs./week): 3:0:0	SEE Marks : 60	Course Code : U23OE610IT
Credits : 3	CIE Marks : 40	Duration of SEE : 3 Hrs

COURSE OBJECTIVES	COURSE OUTCOMES
	<i>On completion of the course, students will be able to</i>
1) Acquire basic skills for designing static and dynamic Web Applications using HTML, CSS, Java Script, Bootstrap and XML.	1. Design a static web pages using HTML, CSS.
2) Acquire fundamental knowledge of Web Security concepts	2. Create dynamic web pages and client side validation using JavaScript.
	3. Develop responsive web applications using Bootstrap.
	4. Build an application using an MVC Framework and XML
	5. Analyze and evaluate web security attacks.

UNIT-I: Introduction

Introduction: World Wide Web, Web Browsers, Web Servers, URL, HTTP, TCP Port. HTML: Standard HTML document structure, Basic Tags, Images, Hypertext Links, Lists, Tables, Frames. CSS: In-line style sheets, Internal Style sheets and External Style sheets.

UNIT-II: Basics of JavaScript

JavaScript: Introduction, Basics of JavaScript-variables, data types and operators, Control Structures, Arrays, Functions, HTML Forms, Events and event handling.

UNIT-III: Bootstrap

Bootstrap: The Grid system, Layout components: Tables, Images, alerts, buttons, badges, progress bars, cards, drop downs, pagination, Collapse, Navbar, Carousel.

UNIT-IV: XML

XML- The Syntax of XML, XML Document Structure, Document Type Definitions.

Introduction to MVC - Introduction to Model View Controller Architecture

UNIT-V: Web Security Fundamentals

Web Hacking Basics, HTTP & HTTPS URL, Evolution of Web Applications - Web Application Security - Core Defence Mechanisms - Handling User Access - Handling User Input- Handling Attackers - Managing the Application, Introduction to Web 2.0

Learning Resources:

1. Robert W. Sebesta, Programming the World Wide Web, 7th Edition (2014), Pearson Education.
2. "Web Technologies", 7th Edition, Uttam K.Roy, 2012.
3. Paul J. Deitel, Harvey M. Deitel, Abbey Deitel, Internet & World Wide Web How to Program, 5th Edition, Pearson Education.
4. <http://getbootstrap.com/>

The break-up of CIE: Internal Tests+ Assignments + Quizzes

1 No. of Internal Tests	:	2	Max. Marks for each Internal Tests	:	30
2 No. of Assignments	:	3	Max. Marks for each Assignment	:	5
3 No. of Quizzes	:	3	Max. Marks for each Quiz Test	:	5

Duration of Internal Tests : 90 Minutes