

Course Learning Objectives (CLOs): This course emphasizes on practice-based learning. It enables the students to understand the web application architecture and use the state-of-the-art technology to provide web-based solutions.

Course Outcomes (COs):

Description of the Course Outcome: At the end of the course the student will be able to:		Mapping to POs(1-12) / PSOs(13-16)		
		Substantial Level (3)	Moderate Level (2)	Slight Level (1)
CO-1	Design and develop a static web pages using XHTML.	5	2,3,13,14,15	12
CO-2	Design and develop dynamic web application to validate and store data using markup languages like-XML, DTD & XSD.	5	2,3,13,14,15	12
CO-3	Design and develop an interactive web application using JavaScript and XHTML with CSS.	5	2,3,13,14,15	12
CO-4	Design and develop dynamic web application using server-side programming and Database connectivity.	5	2,3,13,14,15	12

CO-5	Develop a web service to represent the data in the standard formats for the given requirements.	5	2,3,13,14,15	12
CO-6	Explain the future of World Wide Web and its associated trending technologies.	-	5, 13	1,12

POs/PSOs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Mapping Level	1.0	2.0	2.0	-	3.0	-	-	-	-	-	-	1.0	2.0	2.0	2.0	-

Pre-requisites: Knowledge of

- Programming language (any)
- Database Management Systems

Contents:

Unit-I

Introduction to Web: WWW1.0, HTML, HTML5, XHTML, XML, XSD, DTD, DOM-XML. **8 Hrs**

Unit-II

Introduction to CSS: What is CSS, CSS Syntax, Location of Styles, Selectors, The Cascade: How Styles Interact, The Box Model, CSS Text Styling.

Advanced CSS: Layout, Normal Flow, Positioning Elements, Floating Elements, Constructing Multicolumn Layouts, Approaches to CSS Layout, Responsive Design, CSS Frameworks. **8 Hrs**

Unit-III

Introduction to JavaScript: Basics, Strings, Arrays, Functions, Objects in JavaScript, building simple applications using JavaScript and HTML. **8 Hrs**

Unit-IV

Introduction to PHP: Introduction to PHP, Datatypes, Control Statements, Loops, Functions, Embedding PHP in HTML & MySQL. **8 Hrs**

Unit-V

Introduction to Web 2.0: Overview of WWW 2.0, JSON, Web Services - SOAP & WSDL, RESTful.

Introduction to AJAX: Basics of AJAX, Asynchronous and Synchronous message transformation.

Future of Web: Overview of Semantic Web, Applications of Semantic Web, Virtual Reality, Web OS. **7 Hrs**

Reference Books:

- 1) Robert W. Sebesta, "Programming the World Wide Web", 7/E Pearson Education, 2012.
- 2) Luke Welling and Laura Thomson, "PHP and MySQL Web Development", 5/E, Pearson Education, 2016.
- 3) Nicholas C Zakas, "Professional JavaScript for Web Developers", 3/E, Wrox/Wiley India, 2012.
- 4) Nicholas C Zakas et al, "Professional AJAX", Wrox, 2007.
- 5) Karin K. Breitman, Marco Antonio Casanova and Walter Truszkowski, "Semantic Web: Concepts, Technologies and Applications", Springer International Edition, 2007.