Program	Bachelor of Technology (B.Tech)	**Semester - 3**
Type of Course	-	
Prerequisite		
Course Objective	-	
Effective From A.Y.	2025-26	

Teaching Scheme (Contact Hours)				Examination Scheme				
Lecture	Tutorial	Lab	Credit	Theory Marks		Practical Marks		Total Marks
				SEE TH	IAT	SEE P	CCE	
3	0	2	4	70	-	50	-	170

***SEE** - Semester End Examination, **IAT** - Internal Assessment Test, **CCE** - Continues & Comprehensive Evaluation*

Course Content

T - Teaching Hours | **W** - Weightage

Sr.	Topics	T	W
1	**Client-Side Programming:** JavaScript syntax and data types, Types of JavaScript (inline, internal, external), Variables, arrays and functions, Conditional statements and loops, Pop-up boxes (alert, confirm, prompt), JavaScript objects and the DOM, Inbuilt functions in JavaScript, Form validations using JavaScript, Regular expressions, Event handling in JavaScript	5	10
2	**Server-Side Programming:** Introduction to server-side programming, PHP variables, data types, operators, Decision making and looping with examples, Arrays and functions in PHP, String handling, Form processing and file uploads, Date and time zone functions, PHP Events, Exception handling, JSON handling in PHP, Object-Oriented Programming concepts in PHP	9	20
3	**Session and State Management using PHP and Database Connectivity using PHP:** Importance of session and state management **Techniques for session management:** Hidden fields , Query strings, Cookies, Sessions **Database connectivity using PHP:** Connecting to MySQL, Basic CRUD operations, Object-oriented database access using PHP (MySQL)	9	20
4	**Framework of PHP** Introduction to Laravel and its features, MVC architecture in Laravel, Basic routing, controllers, and models, Session management, Error handling, Flash messages, Blade templating engine and directives, Passing data to views, Introduction to Eloquent ORM	9	10
5	**XML & JSON** Introduction to XML and its applications , XML components: Elements , attributes, nesting DTD and XML Schemas, Well-formed vs. valid XML, Simple XML usage in applications, Introduction to XSL and XSLT, Transforming XML using XSLT, Common XSL elements	9	20
6	**Advanced Concepts:**	4	20

Course Content

T - Teaching Hours | **W** - Weightage

Sr.	Topics	T	W
	Asynchronous web requests using AJAX, Creating RESTful APIs using PHP, Introduction to web services, Web service components and models, Service-Oriented Architecture (SOA), SOAP protocol: characteristics, request/response structure, WSDL (Web Services Description Language) document structure		
		Total	**45**	**100**

Suggested Distribution Of Theory Marks Using Bloom's Taxonomy

Level	Remembrance	Understanding	Application	Analyze	Evaluate	Create
Weightage	20	30	30	20	0	0

NOTE : This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcomes

At the end of this course, students will be able to:	
CO1	Develop interactive web pages by using JavaScript for handling data types, control structures, DOM manipulation, event handling, and validations.
CO2	Understand the basic concepts of PHP.
CO3	Design fully functional dynamic web applications using the concepts of PHP and MYSQL.
CO4	Develop dynamic websites and build structured web applications using Laravel by applying concepts like MVC architecture, routing, controllers, and views.
CO5	Apply XML for data representation, XSLT for data transformation, and implement web services using standards like SOAP and WSDL within a service-oriented architecture
CO6	Apply advanced asynchronous web communication mechanisms like REST API and AJAX for building highly interactive webpages.

CO PO Mapping

CO	CO - 1	CO - 2	CO - 3	CO - 4	CO - 5	CO - 6
PO - 1						
PO - 2						
PO - 3						
PO - 4						
PO - 5						
PO - 6						
PO - 7						
PO - 8						
PO - 9						
PO - 10						
PO - 11						

CO PSO Mapping

CO	CO - 1	CO - 2	CO - 3	CO - 4	CO - 5	CO - 6
PSO - 1	-	-	-	-	-	-
PSO - 2	-	-	-	-	-	-
PSO - 3	-	-	-	-	-	-

Reference Books

1.	1. Steven Holzner, The Complete Reference PHP, Mc Graw Hill. [SH] (TextBook)
2.	2. Sams Teach Yourself WordPress 3 in 10 Minutes by Chuck Tomasi, Kreg Steppe. (TextBook)
3.	3. Laravel: Up & Running, A framework for building modern PHP Apps by 'O' riley Press. (TextBook)
4.	Learning PHP, MySQL, books by 'O' riley Press.
5.	Web Technologies, Uttam Kumar Roy, Debarshi Kumar Sanyal by Oxford University Press

List of Practical

1.	Design a HTML file using JavaScript. a. Make an application which check username and password with java script. And username and password are correct then navigate next page. b. Make an application which check mobile number (number should be started with 9 or 8) and mail id (check @ and .)
2.	Write a JavaScript that uses a loop, which searches a word in sentence held in an array, returning the index of the word.
3.	Write an HTML file with JavaScript that finds position of first occurrence of vowel "a" , last occurrence of a vowel "a" in a given word and returns the string between them. For example ajanta- then script would return first occurrence of "a"-that is position 1 and last occurrence-6 and string between them is "jant".
4.	Write a PHP program to perform web scrapping using HTML DOM parser.
5.	Write a PHP program to demonstrate the use of GET and POST method.
6.	Write a PHP program to parse a CSV file.
7.	Make an application using PHP that collects student information like name, PEN, Gender (use Radio Button), Branch (use Drop Down Box), Semester, contact number (Text Box should masked with numbers only) and address. Create buttons for Insert, Delete, Update and Retrieve the details in/from the database. Alter the table to add a column and add data in that new column.
8.	Develop the web pages using Laravel.
9.	Perform the CURD operations using Laravel
10.	Create a PHP application to store and display student records using XML as the data storage format.
11.	Create a PHP application that demonstrate the use of web services.
12.	Write a program of hello world using Ajax.