SARDAR VALLABHBHAI PATEL EDUCATION SOCIETY'S

R. N. G. PATEL INSTITUTE OF TECHNOLOGY - RNGPIT

An Autonomous Institute u/s UGC Act 1956
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Program Name: Int. M.Sc. (I.T.)
Level: Post Graduate
Branch: Information
Technology Subject Code:
1BS404
Subject Name: Web development using PHP and Laravel

w. e. f. Academic Year:	2025-26
Semester:	04
Category of the Course:	Major Course

Prerequisite:	Web Designing
Rationale:	This course introduces students to PHP skills and Laravel framework knowledge to develop modern, database-driven web applications.

Teaching and Examination Scheme:

Teaching Scheme (in Hours)			C Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	**T**	**PR**	**C**	**Theory**		**Tutorial / Practical**		
				SEE (TH)	IAT	CCE	SEE (P)	
2	0	4	4	70	30	20	30	150

Where SEE: Semester End Examination, IAT: Internal Assessment Test, CCE: Continuous and Comprehensive

Evaluation

Course Content:

Unit No.	Content	No. of Hours	% of Weightage	Corresponding CO(s)
**Section A**				
1	**Web Fundamentals and PHP Basics** 1.1 Web architecture 1.2 HTTP request and response 1.3 Server-side scripting and client-side scripting 1.4 Introduction to PHP 1.5 Installation 1.6 Keywords, variables and constants 1.7 Data Types and operators 1.8 Conditional and looping statements	3	10%	**CO1**
2	**PHP Arrays, Functions and Form Handling** 2.1 Arrays and its functions 2.2 Built-in and User-defined functions 2.3 HTML form handling 2.4 Server-side validation 2.5 Regular expressions 2.6 Sessions and Cookies	6	20%	**CO2**
3	**PHP File Handling, MySQL and Database Programming** 3.1 File handling 3.2 Introduction to MySQL 3.3 PHP integration with MySQL 3.4 CRUD operations 3.5 Prepared statements 3.6 JOIN queries 3.7 Error handling for database operations	6	20%	**CO3**
**Section B**				
4	**Object-Oriented in PHP** 4.1 Classes and Objects 4.2 Constructors and Destructors 4.3 Inheritance 4.4 Method Overriding 4.5 Interfaces and Abstract Classes	3	10%	**CO4**

5	**Laravel Fundamentals** 5.1 Introduction to laravel 5.2 Features and advantages 5.3 MVC architecture 5.4 Composer and laravel installation 5.5 Laravel directory structure 5.6 Request lifecycle 5.7 Artisan commands 5.8 Routes, controllers and Views	6	20%	CO5
6	**Laravel Database Integration** 6.1 Database configuration 6.2 Migrations 6.3 Seeders and factories 6.4 Eloquent ORM 6.5 Query builder 6.6 Form handling 6.7 Validation	6	20%	CO6
	Total	**30**	**100**	

Course Outcome:

After Completion of the Course, the Student will able to:

No	Course Outcomes	Bloom's Taxonomy Alignment
01	Understand web architecture and basics of PHP.	U
02	Apply arrays, functions, and form handling techniques.	A
03	Perform database CRUD operations with MySQL .	A
04	Implement object-oriented programming concepts in PHP.	A
05	Explain MVC architecture and Laravel framework.	U
06	Use database-driven features in Laravel.	A

Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (%)					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
20	**40**	**40**	-	-	-

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

References/Suggested Learning Resources:

(a) Text Books:
1. Verma, R. and Jain, S. (2022) Programming in PHP. Kalyani Publishers.
2. Narang, N. (2021) Web Programming Using PHP. BPB Publications.
3. Jain, D. (2024) Ultimate Laravel for Modern Web Development. Orange Education Pvt. Ltd.

(b) Reference Books:
1. Sharma, N. (2020) Beginning PHP. Khanna Publishing.
2. Kogent Learning Solutions (2019) PHP for Beginners. Dreamtech Press.
3. Stauffer, M. (2024) Laravel: Up & Running. O'Reilly Media.
4. Smith, M. (2025) PHP Crash Course. Independently Published.

Suggested Course Practical List:

Sr. No.	Name of Practical
1.	Write a PHP script to declare variables of different types and print them.
2.	Write a PHP script to print the multiplication table of any number.
3.	Write a PHP script to find the maximum and minimum value in an array.
4.	Write a function that receives two numbers and returns their sum.
5.	Write a PHP script to develop a file upload form for image, Validate file type and file size.
6.	Write SQL queries for student data: Insert data, Update data, Delete data, Select all students
7.	Create a login validation script using prepared statements to avoid SQL injection.
8.	Create a PHP script that defines a class and creates an object using it.
9.	Create an abstract class Shape with abstract method area (). Implement it in Triangle and Rectangle.
10.	Create a simple HTML output that lists: Location of Controllers, Views, Models, Routes. Display them in the browser using Laravel.
11.	Laravel Form Handling: ● Create a form to collect: name, email, age. ● Submit via POST. ● Display submitted data on another Blade view.
12.	Form Request Validation ● Create a Form Request StoreStudentRequest. ● Apply validation rules (name, email, phone). ● Use it in the controller to validate data.
13.	Write a PHP script which performs CRUD operations on Students Data.
14.	Search Functionality ● Add a search bar to the student list. ● Search for students by name or email. ● Display filtered results.
15.	Develop a student management system using laravel.

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