



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Diploma in Engineering

Level: Diploma

Branch: Information Technology

Course / Subject Code : DI01016031

Course / Subject Name : Web Development using PHP

w. e. f. Academic Year:	2024-2025
Semester:	1 <sup>st</sup>
Category of the Course:	ESC

**Prerequisite:** Basic knowledge of computer programming and internet.

<b>Rationale:</b>	PHP is a powerful tool for making dynamic and interactive database driven web pages. PHP is the widely-used as efficient open-source technology. The students of diploma in Information Technology as web developers would be able to write dynamic interactive web-based applications such as for online banking, ticket/hotels booking sites, E- Commerce using PHP and MYSQL database. After study this course, they may work as self-employed web page developer.
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## Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	Design static webpage using HTML tags.	R-3, U-3
02	Create small programs using basic PHP concepts.	A-2, N-1, E-2, C-2
03	Create User defined functions in PHP programming.	U-2, A-1, C-1
04	Design and develop a Web site using form controls for presenting web-based content.	A-2, N-2, E-1, C-3
05	Debug the Programs by applying state management concepts and error handling techniques of PHP.	U-2, A-1, C-2

\*Revised Bloom's Taxonomy (RBT)

## Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Tutorial / Practical		
				ESE (E)	PA / CA (M)	PA/CA (I)	ESE (V)	
0	1	4	3	0	0	20	30	50



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## Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	<b>Introduction to HTML &amp; Forms</b> 1.1 Introduction to HTML 1.2 Syntax - Tags and Attributes 1.3 Formatting Tags (Body, Heading Styles, Paragraph, q, sub, sup, Mark, Pre, Special Characters, head, title) 1.4 Image Tags (img, figure, figcaption, map, area), Hyper linking 1.5 Tables (table, th, tr, td, col, colgroup, caption) 1.6 Lists (Sorted List, Unsorted List, Definition List) 1.7 HTML forms 1.8 Introduction to CSS	8	15
2.	<b>Introduction to PHP</b> 2.1 Configuration and installation of PHP, Apache Web Server, MySQL 2.2 Installing WAMP/XAMPP server 2.3 PHP Structure and Syntax 2.4 Rules of PHP syntax 2.5 PHP Echo and Print statements 2.6 PHP Constants, Variables 2.7 PHP Data Types 2.8 Scope of variables: Static, Local and Global 2.9 PHP operators 2.10 Looping Structure (for, while, do...while, for each, break and continue) 2.11 Conditional Structure (if...else, else if, switch)	15	25
3.	<b>PHP Functions ,array and strings</b> 3.1 User Defined function, argument function, variable function, Return function, default argument, Passing Arguments by Reference, Recursive function 3.2 Include() and require() function 3.3 Creating index based and Associative array and multidimensional Array 3.4 Accessing array Element 3.5 Library functions of an array. (Count, list, in_array, current, next, previous, end, each, sort, array_merge, array_reverse) 3.6 Creating and accessing String 3.7 Searching & Replacing String and Formatting String 3.8 String Related Library function: (Chr, ord, strtolower, strtoupper, strlen, ltrim, rtrim, trim, substr, strcmp, strcasecmp, strpos, strstr, stristr, str_replace, strrev)	11	20
4.	<b>Working with data and form handling</b>	11	20



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	4.1 Create, opening, Reading and writing file 4.2 working with directory 4.3 file uploading and downloading 4.4 Submitting form values using Get and Post Methods 4.5 Reading data from form using super globals \$_GET, \$_POST and \$_REQUEST 4.6 Validate name using preg_match() function 4.7 Validate email and URL using filter() function 4.8 Sending plain text email, Sending HTML email and Sending attachments with email		
5.	<b>Working with Cookies, Session, and Error Handling</b> 5.1 Creating Cookies 5.2 Set Cookies 5.3 Destroying Cookies 5.4 Creating Session 5.5 Set Session 5.6 Destroying Session 5.7 Exception Handling in PHP using die() using custom error handling using try and catch	11	20
	<b>Total</b>		<b>100</b>

## Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (in %)					
R Level	U Level	A Level	N Level	E Level	C Level
--- Not Applicable---					

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) Books:

Sr. No.	Title of Book	Author	Publication with place, year and ISBN
1	HTML & CSS: The Complete Reference	Thomas Powell	McGraw Hills, 2010
2	Beginning PHP and MySQL, 4 <sup>th</sup> Edition	W. Jason Gilmore	Apress, 2010
3	PHP: The Complete Reference	Steven Holzner	McGraw-Hill, 2017
4	Learning PHP, MySQL, JavaScript, CSS & HTML5, Fourth Edition!	Robin Nixon!	O'reilly Media
5	Beginning PHP and MySQL	W. Jason Gilmore	Apress



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6	Head First PHP & MySQL	Lynn Beighley, Michael Morrison	O'reilly Media, 2015
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**(b) Open source software and website:**

1. <https://www.php.net/>
2. <http://www.codecademy.com/tracks/php>
3. <http://www.w3schools.com/html>
4. <https://www.phptutorial.net>
5. <http://www.tutorialspoint.com/php>
6. <https://www.homeandlearn.co.uk/php/php.html>
7. <https://www.javatpoint.com/php-tutorial>
8. <https://www.geeksforgeeks.org/php-tutorials/>

**Suggested Course Practical List:**

Sr. No	Practical Outcomes (PrOs)	Unit No.	Approx. Hrs. Required
1	Create html page which will use different html tags.	1	04
2	Use HTML table tags to create HTML web page.	1	04
3	Create html form with html controls and apply concepts of CSS to it.	1	04
4	Write a PHP script to display Welcome message.	2	02
5	Write a PHP script to demonstrate use of global, local, static and constant variables.	2	02
6	Write a PHP script to demonstrate arithmetic operators, comparison operator, and logical operator.	2	02
7	Write a PHP program to swap two numbers with and without using third variable.	2	02
8	Write a PHP program to check the given number is odd or even.	2	02
9	Write PHP Script to print Fibonacci series in html tabular format.	2	02
10	Write a PHP Script to show different looping structure.	2	02
11	Write a PHP script to call by reference and call by value.	3	02
12	Write PHP Script for addition and multiplication of two 2x2 matrices.	3	02
13	Write a PHP Script for performing function that takes arguments, returns arguments, default argument and variable length argument.	3	02
14	Write PHP script to demonstrate use of various strings handling function.	3	02
15	Write a PHP script to Demonstrate Include () and require () function.	3	02
16	Write PHP script to demonstrate Array functions.	3	02
17	Write PHP script to demonstrate use of fopen(), fread(), fwrite() and fclose() File functions.	3	02
18	Create student registration form using text box, check box, radio button, select, submit button. And display user inserted value in new PHP page using GET Method.	4	02
19	Create Website Registration Form using text box, check box, radio button,	4	02



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	select, submit button. Display user inserted value in new PHP page using POST method.		
20	Write PHP script to validate form including name, email using appropriate functions.	4	02
21	Write PHP script for sending plain text email, HTML email and attachments with email.	4	03
22	Write a PHP script to explain concept of \$_REQUEST.	4	03
23	Write a PHP script to demonstrate creating, deleting, updating, retrieving and passing variable cookie data.	5	03
24	Write two different PHP script to demonstrate passing variables with sessions.	5	03
25	Write a PHP script to demonstrate Error Handling.	5	02
	<b>Total</b>		60

## List of Laboratory/Learning Resources Required:

Sr. No.	Equipment Name with Broad Specifications	Practical No.
1	Computer with latest configuration with windows or UNIX OS with web browser	All
2	XAMPP/WAMP tool, editors like VSCODE, notepad++, sublime	All

## Suggested Project List:

A suggestive list of micro-projects is given here. This should relate highly with competency of the course and the COs. Similar micro-projects could be added by the concerned course teacher:

- Develop website for your department
- Create web-based feedback system
- Develop a dynamic website for online admission process.
- Create a login-based web application like Feedback Form/Address book/rating.
- Create a web application library management system.
- Create a website for student management system which can be useful to your institute.
- Create a login-based web application e-book uploading and downloading.

## Suggested Activities for Students:

These are sample strategies, which the student/teacher can use to accelerate the attainment of the various outcomes in this course:

- Massive open online courses (MOOCs) may be used to learn/teach various topics/sub topics.
- Students can do group learning amongst them so that teaching can easily enhanced.
- Students can study different web application and try to prepare such application.

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