

GUJARAT TECHNOLOGICAL UNIVERSITY, AHMEDABAD, GUJARAT

COURSE CURRICULUM COURSE TITLE: WEB DESIGNING USING PHP AND MYSQL (COURSE CODE: 3361603)

Diploma Program in which this course is offered	Semester in which offered
Information Technology	SIXTH

1. RATIONALE

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 mastering this course they may work as self employed web page developer.

2. COMPETENCY

The course content should be taught and implemented with the aim to develop required skills in the students so that they are able to acquire following competency:

- **Develop interactive web based application using PHP and MySQL**

3. COURSE OUTCOMES:

The theory should be taught and practical should be carried out in such a manner that students are able to acquire different learning out comes in cognitive, psychomotor and affective domain to demonstrate following course outcomes.

- i. Create small programs using basic PHP concepts.
- ii. Apply In-Built and Create User defined functions in PHP programming.
- iii. Design and develop a Web site using form controls for presenting web based content.
- iv. Debug the Programmes by applying concepts and error handling techniques of PHP.
- v. Create dynamic Website/ Web based Applications, using PHP, MySQL database

4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)	Examination Scheme				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	ESE	PA	ESE	PA	
3	0	4	7	70	30	40	60	200

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P - Practical; C - Credit; ESE - End Semester Examination; PA - Progressive Assessment

5. COURSE DETAILS

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics
Unit – I Introduction to PHP	1a. Identify relationship between Apache, MySQL and PHP 1b. State steps to Install & test web server 1c. State Steps to Configure Apache to use PHP	1.1 Configuration of PHP, Apache Web Server, MySQL and Open Source 1.2 Relationship between Apache, MySQL and PHP(AMP Module) 1.3 Installing PHP for (Windows, Wamp server , XAMP server),
	1d. Create simple PHP page using PHP structure and Syntax. 1e. List and state use of PHP variables, data types . 1f. Describe use of PHP Operators. 1g. Apply control structures in programming 1h. State the steps to use different types of array in given application 1i. State the steps to create user defined functions	1.4 PHP Structure and Syntax 1.5 Creating PHP pages 1.6 Rules of PHP syntax 1.7 Integrating HTML with PHP 1.8 Constants , Variables: Static and Global Variable 1.9 Conditional Structure and Looping, PHP operators 1.10 Arrays, constructs 1.11 User Defined function, argument function, variable function, Return function, default argument, variable length argument
Unit – II Working with In Built Functions	2a. Apply various InBuilt Variable, String, MATH, Date, Array, File Functions in programming	2.1 Variable Function: (gettype, settype, isset, strval, floatval, intval, print_r) 2.2 string function: (Chr, ord, strtolower, strtoupper, strlen, ltrim, rtrim, trim, substr, strcmp, strcasecmp, strpos, strstr, str_replace, strrev, echo, print) 2.3 MATH functions: (Abs, ceil, floor, round, fmod, min, max, pow, sqrt, rand) 2.4 Date function: (Date, getdate, setdate, checkdate, time, mktime) 2.5 Array Function: (Count, list, in_array, current, next, previous, end, each, sort, array_merge, array_reverse) 2.6 File function:

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics
		(Fopen, fread, fwrite, fclose)
Unit – III Working with data and forms	3a. State the steps to Create an input form 3b.State the steps to use Using PHP \$_Get and \$_Post, \$_Request method for a given application	3.1 Reading data using Form Controls (Text Fields, Text Areas, CheckBoxes, Radio Buttons, List Boxes, Password Controls, Hidden Controls, Image Maps, File Uploads, Buttons) 3.2 Submitting form values, using \$_Get and \$_Post Methods, \$_REQUEST 3.3 Accessing form inputs with Get/Post functions 3.4 Combining HTML and PHP codes together on single page, Redirecting the user
Unit - IV Session, Cookies and Error Handling	4a. Use cookie to store and retrieve data 4b. Use querystring to transfer data 4c. Create session variable and handle session 4d. Handle runtime errors through exception handling	4.1 Setting a cookie with PHP, Deleting a cookie 4.2 Creating session cookie 4.3 Working with the query string Creating query string 4.4 Session 4.5 Starting and Destroying session 4.6 Working with session variables , Passing session IDs 4.7 Error Types in PHP 4.8 Exception Handling in PHP
Unit - V Database Connectivity using MYSQL	5a. Describe/ State MySQL structure and Syntax 5b. Discuss types of MySQL tables and storage engines 5c. Apply/Use various MySQL commands on database 5d. State steps to connect with database using PHP and MYSQL 5e. Write MySQL commands to Insert, Update, Delete records 5f. Describe steps for hosing a Website using ‘C’ panel and Filezilla software	5.1 Concepts and Installation of MySQL 5.2 MySQL structure and syntax 5.3 Types of MySQL tables and Storage engines 5.4 MySQL commands 5.5 Integration of PHP with MySQL 5.6 Connection to the MySQL Database 5.7 Creating and DeletingMySQL database usingPHP 5.8 Updating, Inserting, Deleting records in the MySQL database 5.9 Hosting Website (Using ‘C’ panel, Using Filezilla Software)

6. SUGGESTED SPECIFICATION TABLE WITH HOURS & MARKS (THEORY)

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks			
			R Level	U Level	A Level	Total Marks
I	Introduction to PHP	6	4	4	2	10
II	Working With Functions	6	4	6	4	14
III	Working with DATA and Forms	9	2	6	6	14
IV	Cookie, Session and Error Handling	9	4	8	4	16
V	Database Connectivity using MYSQL	12	2	6	8	16
	Total	42	16	30	24	70

Legends: R = Remembrance; U = Understanding; A = Application and above levels (Revised Bloom's taxonomy)

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

7. SUGGESTED LIST OF EXERCISES/PRACTICAL

The practical/exercises should be properly designed and implemented with an attempt to develop different types of skills (**outcomes in psychomotor and affective domain**) so that students are able to acquire the competencies/programme outcomes. Following is the list of practical exercises for guidance.

*Note: Here only outcomes in psychomotor domain are listed as practical/exercises. However, if these practical/exercises are completed appropriately, they would also lead to development of certain outcomes in affective domain which would in turn lead to development of **Course Outcomes** related to affective domain. Thus over all development of **Programme Outcomes** (as given in a common list at the beginning of curriculum document for this programme) would be assured.*

S. No.	Unit No.	Practical Exercises (Outcomes in Psychomotor Domain)	Approx. Hours Required
1.	I	Write a PHP script to display Welcome message.	2
2.		Write a PHP script to demonstrate arithmetic operators, comparison operator, and logical operator.	2
3.		Write PHP Script to print Fibonacci series.	2
4.		Write PHP Script to generate result and display grade.	2
5.		Write PHP Script to find maximum number out of three given numbers.	2
6.		Write PHP Script for addition of two 2x2 matrices.	2
7.	II	Write PHP script to demonstrate Variable function.	2
8.		Write PHP script to obtain 5! Using function	2
9.		Write PHP script to demonstrate string function.	2
10.		Write PHP script to demonstrate Date functions.	2
11.		Write PHP script to demonstrate Math functions.	2
12.		Write PHP script to demonstrate Array functions.	2

S. No.	Unit No.	Practical Exercises (Outcomes in Psychomotor Domain)	Approx. Hours. Required
13.		Write PHP script to demonstrate File functions.	2
14.	III	Create student registration form using text box, check box, radio button, select, submit button. And display user inserted value in new PHP page.	2
15.		Create Website Registration Form using text box, check box, radio button, select, submit button. And display user inserted value in new PHP page.	2
16.	IV	Write two different PHP script to demonstrate passing variables through a URL.	2
17.		Write two different PHP script to demonstrate passing variables with sessions.	2
18.		Write PHP script to demonstrate passing variables with cookies.	2
19.		Write a program to keep track of how many times a visitor has loaded the page.	2
20.		Write an example of Error-handling using exceptions.	2
21.	V	Write a PHP script to connect MySQL server from your website.	2
22.		Write a program to read customer information like cust_no, cust_name, Item_purchase, and mob_no, from customer table and display all these information in table format on output screen.	2
23.		Write a program to edit name of customer to "Bob" with cust_no =1, and to delete record with cust_no=3.	2
24.		Write a program to read employee information like emp_no, emp_name, designation and salary from EMP table and display all this information using table format.	2
25.		Create a dynamic web site using PHP and MySQL.	8
TOTAL			56

8. SUGGESTED LIST OF STUDENT ACTIVITIES

Following is the list of proposed student activities like:

- i. Prepare power point presentation showing relation between PHP, APACHE and MYSQL.
- ii. Develop sample web based Application using PHP and MYSQL and present the same.

9. SPECIAL INSTRUCTIONAL STRATEGIES (if any)

- i. Concepts should be introduced in classroom input sessions and by giving demonstration through projector.
- ii. Arrange expert lectures by IT experts working professionally in the area of webpage development.
- iii. More focus should be given on practical work which will be carried out in laboratory sessions. If possible some theory sessions may be conducted in labs so that theory and practice can go hand in hand.

- iv. Faculty should allow students to use their creativity and let them struggle to learn on their own during practical sessions. However, faculty should remain around the students and should help them when they are stuck.
- v. Arrange a webpage development competition by making groups of four students each and award the winning group. Give publicity to this competition at institute/city level.

10. SUGGESTED LEARNING RESOURCES

A) List of Books

S. No.	Title of Book	Author	Publication
1	Beginning PHP and MySQL, 4 th Edition	W. Jason Gilmore	Apress, 2010
2	PHP: The Complete Reference	Steven Holzner	McGraw-Hill, 2008
3	Learning PHP, MySQL, JavaScript, CSS & HTML5, Third Edition	Robin Nixon	O'reilly Media , 2014
4	Teach yourself PHP, MySQL and Apache All in One , 5 th Edition	Julie C. Meloni,	Pearson Education, 2012

B) List of Major Equipment/ Instrument with Broad Specifications

1. Computer System with latest configuration, Server with latest specification, broadband or leased line connection
2. Multimedia Projector

C) List of Software/Learning Websites

Software: WAMP server / XAMPP server, 'C' Panel, Text Editor

- i. <http://www.codecademy.com/tracks/web> ,
- ii. <http://www.codecademy.com/tracks/php>
- iii. <http://www.w3schools.com/PHP>
- iv. <http://www.tutorialpoint.com>
- v. <http://www.homeandlearn.co.uk>

11. COURSE CURRICULUM DEVELOPMENT COMMITTEE

Faculty Members from Polytechnics

- Mrs. Rikita Dhaval Parekh, Lecturer (IT), Government Polytechnic For Girls, Ahmedabad
- P.V.Garach, , Lecturer (IT), Government Polytechnic For Girls, Ahmedabad

Coordinator and Faculty Members from NITTTR Bhopal

- Dr. K. James Mathai, Associate Professor, Dept. of Computer Engineering and Applications.
- Dr. Shailendra Singh, Professor and Head, Dept. of Computer Engineering and Applications.