

GOVERNMENT POLYTECHNIC, NAGPUR

(An Autonomous Institute of Govt. of Maharashtra)

COURSE CURRICULUM

PROGRAMME	: DIPLOMA IN COMPUTERENGINEERING
LEVEL NAME	: ELECTIVE COURSES
COURSE CODE	: CM505E\$
COURSE TITLE	: WEB PROGRAMMING
PREREQUISITE	: CM413E
TEACHING SCHEME	: TH: 03; TU: 00; PR: 02(CLOCK HRs.)
TOTAL CREDITS	: 04(1 TH/TU CREDIT = 1 CLOCK HR., 2 PR CREDIT = 2 CLOCK HR.)
TH. TEE EXAM	: 03 HRs
PR. TEE EXAM	: 02 HRs (External)
PT. EXAM	: 01 HR

❖ 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 Computer engineering 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.

❖ COURSE OUTCOMES:

After completing this course students will be able to–

1. Identify Apache Web Server, MySQL server environment to create, debug and run PHP program.
2. Identify In-Built and User defined function in PHP programming.
3. Illustrate form controls for presenting web based content.
4. Create and execute PHP scripts by applying concept of error handling techniques of PHP.
5. Create and execute a PHP script for various file commands.
6. Create dynamic website/web based applications using PHP, MySQL database.

❖ **COURSE DETAILS:****A. THEORY :**

Units	Specific Learning Outcomes (Cognitive Domain)	Topics and subtopics	Hrs.
1.Introduction to PHP	1.Identify relationship between Apache, MySQL and PHP. 2.Discuss the steps to Install and test web server 3.Develop simple PHP page using PHP structure and Syntax. 4.List and state use of PHP variables, data types. 5.Describe use of PHP Operators.	1.1 Configuration of PHP, Apache Web Server, MySQL and Open Source 1.2 Installing PHP for (Windows, Wamp server, XAMP server) 1.3 PHP Structure and Syntax 1.4 Creating PHP pages 1.5 Rules of PHP syntax 1.6 Integrating HTML with PHP 1.7 Constants, Variables: Static and Global Variable. 1.8 Variable manipulation 1.9 Dynamic variables 1.10 Operators 1.11 String in PHP	06
2.Programming Principles in PHP	1.Describe use of PHP control structures. 2.Apply control structures in programming 3.List and state use of PHP functions. 4.State the steps to use different types of array in given application 5.Describe use of PHP Constructors. 6.Handle runtime errors through exception handling 7.List error levels in PHP.	2.1 Control Structures- if statement, Using the else clause with if statement, switch statement, The while statement, do while statement, for statement. 2.2 Functions - Defining a function, User Defined function, argument function, variable function, Return function, default argument, variable length argument. Variable Function: gettype, settype, isset, strval, floatval, intval, print_r.MATH functions: Abs, ceil, floor, round, fmod, min, max, pow, sqrt, randDatefunction:Date, getdate, setdate, checkdate, time, mktime. 2.3 Arrays: Single-Dimensional Arrays Multidimensional Arrays, Casting Arrays 2.4 Constructors 2.5 Error types: Parse error, Run time errors, Logic errors, Debugging Methodology, Error levels	08

3. Working with data and forms	1.State the steps to Create an input form 2.State the steps to use Using PHP \$_Get and \$_Post, \$_Request method for a given application 3.Apply data validation in programming	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 Data Validation: Checking data with built in PHP functions(Stripping unwanted characters, Testing network names, Dates, Escaping Shell commands, Escaping SQL queries)	08
4. Sessions and Cookies	1.State the use of cookies to store and retrieve data 2.State the use of query string to transfer data 3.Describe session variable and handle session 4.Describe Session ID propagation	4.1 Setting a cookie with PHP, Deleting a cookie 4.2Creating session cookie 4.3Working with the query string Creating query string 4.4Session 4.5Working with session variables , Passing session IDs 4.6Session ID propagation	08
5. Database Connectivity using MYSQL	1.Describe/ State MySQL structure and Syntax 2.Describe the types of MySQL tables and storage engines 3. Apply various MySQL commands on database 4. State the steps to connect with database using PHP and MYSQL 5.Make use of MySQL commands to Insert, Update, Delete records	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 Deleting MySQL database using PHP 5.8 Updating, Inserting, Deleting records in the MySQL database	10
6. Working with the File System	1.Make use of various File commands 2.Make use of various Directory commands 3.Illustrate Opening a file for	6.1 Creating and deleting a file 6.2 Reading and writing text files 6.3 Working with directories in PHP	08

	writing, reading or appending 4.State the program for creating and deleting a file.	6.4 Checking for existence of file 6.5 Opening a file for writing, reading, or appending 6.6 Writing Data to the file 6.7 Reading character	
Total Hrs.			48

B. LIST OF PRACTICALS/LABORATORY EXPERIENCES/ASSIGNMENTS:

Practicals	Specific Learning Outcomes (Psychomotor Domain)	Units	Hrs.
1	Create and execute PHP script to demonstrate arithmetic operators, comparison operator, and logical operator	Introduction to PHP	2
2	Create and execute PHP script to demonstrate Math functions	Programming Principles in PHP	2
3	Create and execute PHP script to demonstrate Array functions		2
4	Create and execute PHP script for Error-handling using exceptions		2
5	Create student registration form using text box, check box, radio button, select, submit button and display user inserted value in new PHP page	Working with data and forms	2
6	Create Registration Form using text box, check box, radio button, select, submit button and display user inserted value in new PHP page		2
7	Create a form and apply the Data Validation		2
8	Create and execute two different PHP script to demonstrate passing variables through a URL.	Sessions and Cookies	2
9	Create and execute two different PHP script to demonstrate passing variables with sessions		2
10	Create and execute PHP script to demonstrate passing variables with cookies		2
11	Create and execute a program to keep track of how many times a visitor has loaded the page		
12	Create and execute a PHP script to connect MySQL server from your web page	Database Connectivity using MYSQL	2
13	Create and execute PHP script to read customer information from customer table and display all those information in table format on output screen		2
14	Create and execute a PHP script for creating and deleting a file	Working with the File System	2
15	Create and execute a PHP script for reading and writing a file		
16	Mini Project (e.g. Create a dynamic web site using PHP and MySQL)		4
Skill Assessment			2
Total Hrs			32

❖ SPECIFICATION TABLE FOR THEORY PAPER:

Unit No.	Units	Levels from Cognition Process Dimension			Total Marks
		R	U	A	
01	Introduction to PHP	02(00)	08(04)	00(00)	10(04)
02	Programming Principles in PHP	00(00)	04(04)	06(00)	10(04)
03	Working with data and forms	02(02)	04(04)	06(00)	12(06)
04	Sessions and Cookies	02(00)	04(04)	06(06)	12(10)
05	Database Connectivity using MYSQL	02(00)	08(04)	06(06)	16(10)
06	Working with the File System	02(02)	08(04)	00(00)	10(06)
	Total	10(04)	36(24)	24 (12)	70(40)

R – Remember

U – Understand

A – Analyze / Apply

❖ QUESTION PAPER PROFILE FOR THEORY PAPER

Q. No	Bit 1			Bit 2			Bit 3			Bit 4			Bit 5			Bit 6			option
	T	L	M	T	L	M	T	L	M	T	L	M	T	L	M	T	L	M	
01	1	R	2	3	R	2	4	R	2	5	R	2	6	R	2	3	R	2	5/7
	6	R	2																
02	1	U	4	1	U	4	2	U	4	1	U	4	2	U	4				3/5
03	3	U	4	4	U	4	5	U	4	3	U	4	4	U	4				3/5
04	5	U	4	6	U	4	6	U	4	5	U	4	6	R	4				3/5
05	2	A	6	3	A	6	4	A	6										2/3
06	4	A	6	5	A	6	5	A	6										2/3

T= Unit/Topic Number

L= Level of Question

M= Marks

R-Remember

U-Understand

A-Analyze/ Apply

❖ **ASSESSMENT AND EVALUATION SCHEME:**

	What		To Whom	Frequency	Max Marks	Min Marks	Evidence Collected	Course Outcomes
Direct Assessment Theory	CA (Continuous Assessment)	Progressive Test (PT)	Students	Two PT (average of two tests will be computed)	20	--	Test Answer Sheets	1, 2, 3
		Assignments		Continuous	10	--	Assignment Book / Sheet	1, 2, 3
	TEE (Term End Examination)	End Exam	Students	End Of the Course	70	28	Theory Answer Sheets	1, 2, 3
				Total	100	40		
Direct Assessment Practical	CA (Continuous Assessment)	Skill Assessment	Students	Continuous	20	--	Rubrics & Assessment Sheets	4,5,6
		Journal Writing		Continuous	05	--	Journal	4,5,6
				TOTAL	25	10		
	TEE (Term End Examination)	End Exam	Students	End Of the Course	50	20	Rubrics & Practical Answer Sheets	4,5,6
Indirect Assessment	Student Feedback on course		Students	After First Progressive Test	Student Feedback Form			1, 2, 3, 4,5,6
	End Of Course			End Of The Course	Questionnaires			

❖ **SCHEME OF PRACTICAL EVALUATION:**

S.N.	Description	Max. Marks
1	Writing program, Logic of the program	10
2	Debug the program	20
3	Execution of program, Program Output, Complexity of program	10
5	Viva voce	10
	TOTAL	50

❖ **MAPPING COURSE OUTCOMES WITH PROGRAM OUTCOMES:**

Course Outcomes (COs)	Program Outcomes (POs)										PSOs	
	1	2	3	4	5	6	7	8	9	10	1	2
1	-	3	3		-	-	-	-	-	-	3	3
2	-	3	3		-	-	-	-	-	-	3	3
3	-	3	3		-	-	-	-	-	-	3	3
4	-	3	3	3	-	-	-	3	3	3	3	3
5	-	3	3	3	-	-	-	3	3	3	3	3
6	-	3	3	3	-	-	-	3	3	3	3	3

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

❖ **REFERENCE & TEXT BOOKS:**

S.N.	Title	Author, Publisher, Edition and Year Of publication	ISBN Number
1.	Learning PHP, MySQL & JavaScript with j Query, CSS & HTML5	Robin Nixon, Shroff Publishers & Distributors Private Limited Fourth edition, 2015	10: 9352130154
2.	Beginning PHP and MySQL	W. Jason Gilmore, Apress, 4 th Edition, 2010	10: 1430231149
3.	PHP: The Complete Reference	Steven Holzner, McGraw-Hill, 1 st Edition, 2007	10: 0070223629
4.	Learning PHP, MySQL, JavaScript, CSS & HTML5	Robin Nixon, O'reilly Media, 3 rd Edition, 2014	10:9352130154
5	Web Technologies: Black Book	Kogent Learning Solutions Inc., Dreamtech Press, 2009	10: 8177229974

❖ **E-REFERENCES:**

- http://www.w3schools.com/php/php_intro.asp, assessed on 01thSeptember 2016
- http://www.tutorialspoint.com/php/php_form_introduction.htm, assessed on 10thSeptember 2016
- <http://www.freewebmasterhelp.com/tutorials/phpmysql> , accessed on 5th November, 2016

❖ **LIST OF MAJOR EQUIPMENTS/INSTRUMENTS WITH SPECIFICATION**

1. Computer System with latest configuration
2. Multimedia Projector
3. Software- Wamp/Xampp Server, Text Editor, SQL 2010 Server

❖ **LIST OF EXPERTS & TEACHERS WHO CONTRIBUTED FOR THIS CURRICULUM:**

S.N.	Name	Designation	Institute / Industry
1.	Mr. S. P. Lambhade	HOD, Dept. of Computer Engineering	Government Polytechnic, Nagpur.
2.	Ms. G. B. Chavan	Lecturer in Computer Engineering	Government Polytechnic, Nagpur.
3.	Ms. D. M. Shirkey	Lecturer in Computer Engineering	Government Polytechnic, Nagpur.
4.	Mr. L. D. Vilhekar	Lecturer in Information Technology	Government Polytechnic, Nagpur.
5.	Prof. Manoj Jethawa	HOD Computer Science	Shri. Datta Meghe Polytechnic, Nagpur
6	Prof. N. V. Chaudhari	Asst.Professor(CSE)	DBACEO, Wanadongari, Nagpur
7	Mr. Atul Upadhyay	CEO	Vista Computers, Ram Nagar, Nagpur

 (Member Secretary PBOS)

 (Chairman PBOS)