Lok Jagruti Kendra University
University with a Difference

Diploma
in
Information Technology

Course Code:025040403

Web Technology

Programme / Branch Name	Diploma in Information Technology				
Course Name	Web Technology			**Course Code**	025040403
Course Type	HSSC	BSC	ESC	PCC	OEC	PEC

Legends: HSSC: Humanities and Social Sciences Courses   BSC: Basic Science Courses
ESC: Engineering Science Courses   PCC: Program Core Courses
OEC: Open Elective Courses   PEC: Program Elective Courses

1. Teaching and Evaluation Scheme

Teaching Hours / Week / Credits				Evaluation Scheme			
L	**T**	**P**	**Total Credit**	**CCE**	**SEE (Th)**	**SEE (Pr)**	**TOTAL**
2	0	4	4	50	50	50	150

Legends:

L: Lectures   T: Tutorial   P: Practical
CCE: Continuous & Comprehensive Evaluation
SEE (Th):   Semester End Evaluation (Theory)
SEE (Pr):   Semester End Evaluation (Practical)

2. Prerequisites

✓ Basic knowledge of programming, website and webpages.

3. Rationale

Web Technology refers to the various tools and techniques that are utilized in the process of communication between different types of devices over the internet. One of the elements of this technology is web server which needs to be programmed in order to process the network requests of the users and serve them with files also called web pages. PHP is the scripting language, which is used to create such web pages. Learning of this course enables students to develop dynamic web pages using PHP which leads to development of fully functional web applications.

4. Objectives

✓ To learn the installation of environment necessary to prepare and run PHP programs.

✓ To learn the basic and advanced constructs of PHP language.

✓ To aquire knowledge about session and state management through session variables and cookies.
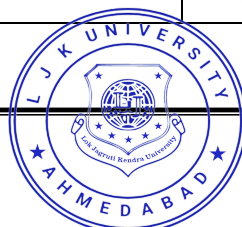
✓ To be able to perform database operations using PHP.

5. Contents

Unit No.	Unit Name	Topics	Learning Outcome	% Weightage	Hours
1	**PHP Introduction & Basic Syntax**	1.1 What is PHP 1.2 WAMP, LAMP & XAMPP 1.3 WampServer installation and basic troubleshooting techniques. 1.4 PHP file creation and running the first program 1.5 PHP syntax rules 1.6 Data types and operators 1.7 Variable, constant and operators 1.8 Decision Making control statements: if, if-else, nested if-else, switch, break and continue statement 1.9 Loop control structures: while, do-while, for, foreach	• To understand what is PHP and its applications are, Installation of environment required to run PHP program. • To understand the basic constructs of a PHP and its applications.	20	6
2	**Arrays and User-defined Functions**	2.1 Array- How it differs than traditional array 2.2 Types of Arrays: Numeric, Associative and Multi-dimensional, Accessing array elements using foreach loop 2.3 User-defined function 2.4 Default Argument 2.5 Pass by value Vs Pass by reference	• To understand the syntax and use of array with practical application in PHP. • To learn how to define a function. Also to learn the use of default argument in function. • To understand the difference between two data paasing methods in user-defined function.	15	4

3	**Built-in Functions**	3.1 Date and Time functions: date, checkdate, date_diff, date_parse, getdate, time, mktime. 3.2 Array functions: count, sort, array_count_values, array_key_exists, array_push, array_search, array_reverse, array_unique, array_values, , in_array, array_walk. 3.3 String functions: explode, implode, trim, md5, str_contains, str_replace, str_split, strcmp, strlen, strops, strtolower, strtoupper. 3.4 File functions: fopen, fread, fwrite, fclose, copy, file_exists, filesize, mkdir, rmdir, unlink.	• To learn important built-in functions available in PHP, their syntax and use.	30	8
4	**Session, Cookie and Form Submission in PHP**	4.1 Session variable syntax and its use 4.2 Cookie: Understaing cookies, creating and deleting cookies 4.3 Form Elements: Textbox, Text area, Password box, Radio button, Check box, Dropdown box, List box, File upload, Submit button, Reset button. 4.4 Form submission and validation 4.5 Uploading file using PHP	• To understand the concept of session variable and its applications. • To understand the concept of cookies and manage cookies in PHP. • To learn the form creation using different form elements. • To be able to submit and validate the form using session variable.	20	6
5	**Database Operations using PHP**	5.1 Introduction to MySQL and PHPMyAdmin 5.2 Database operations like Insert, Update, Delete and Select in PHP 5.3 Introduction to web hosting	• To be able to manage MySQL database using PHPMyAdmin. • To be able to perform various database operations using PHP.	15	4
			Total Hours		**28**

6. List of Practicals / Exercises

The practicals/exercises have been properly designed and implemented in an attempt to develop different types of skills so that students can acquire the competencies/programme outcomes. Following is the list of practicals/exercises.

Sr. No	Practicals / Exercises	Key Competency	Hours
1	Installation of WampServer and basic trouble shooting.	To be able to install environment required to run a PHP program	1
2	Write a program to display a paragraph.	To be able to display basic output using PHP	1
3	Write a program to store country name 'India' in a variable and display string "I love India".	To be able to learn using variable and string concatenation operator	1
4	Write a program to demonstrate use of = = and = = = operators.	To understand difference between = = and = = = operators	1
5	Write a program to find area of a circle.	To learn to define a constant	1
6	Write a program to find the largest number among three given numbers	To learn the use of decision making control statements	1
7	Write a program to find a factorial of a given numbers	To learn the use of loop control statements	2
8	Write a program to perform arithmetic operation between two numbers using user-defined function	To learn to define the user-defined function	2
9	Write a program to declare and initialize an array to store book information like title, author and publisher. Also write code to display the stored information.	To learn how to initialize assosiative arrays and access them.	2
10	Write a program to declare and initialize an array to store result of two students using multi-dimansional array. Also write code to display the marks along with names of students.	To learn how to initialize multi-dimensional arrays and access them.	2
11	Write a program to demonstrate date and time functions.	To learn use of different date and time functions.	4
12	Write a program to demonstrate array functions.	To learn use of different array functions.	4
13	Write a program to demonstrate string functions.	To learn use of different string functions.	4
14	Write a program to demonstrate file functions.	To learn use of different file functions.	4
15	Write a program to demonstrate initialization and access of a session variable.	To learn how to initialize and use session variable.	2
16	Write a program to initialize a cookie that expires after 1 hour.	To be able to declare and initialize a cookie.	2
17	Write a program to design a user registration form, validate it and display the user inserted values.	To be able to design a proper form, validate it and access the values inserted.	4
18	Write a program to upload a file.	To learn the file uploading using PHP.	2

19	Write a program to develop a secure login page.	To be able to develop a functional login page.	4
20	Develop a simple application to Insert, Retrieve, Update and Delete data from database.	To learn various database operations and how to apply them.	12
		Total Hours	**56**

7. Suggested Specification Table for Evaluation Scheme

Unit No.	Unit Name	Distribution of Topics According to Bloom's Taxonomy					
		R %	U %	App %	C %	E %	An %
1	PHP Introduction & Basic Syntax	30	30	30	-	-	10
2	Arrays and User-defined Functions	20	30	30	-	-	20
3	Built-in Functions	40	30	30	-	-	-
4	Session, Cookie and Form Submission in PHP	20	20	30	10	10	10
5	Database Operations using PHP	20	20	20	20	10	10

Legends: R: Remembering   U: Understanding
App: Applying   C: Creating
E: Evaluating   An: Analyzing

8. Text Books

1) PHP: The Complete Reference by Steven Holzner, Latest Edition, McGrawHill Education.

9. Reference Books

1) Learning PHP, MySQL, Javascript, CSS & HTML5 by Robin Nixon, Latest Edition, O'Reilly' Publication.

2) Head First PHP & MySQL: A Brain-Friendly Guide by Lynn Beighly, Latest Edition, O'Reilly' Publication.

3) PHP & MySQL Web Development by Laura Thomson, Luke Welling, Latest Edition, Sams Publication.

10. Open Sources (Website, Video, Movie)

1) www.python.org/doc

2) https://www.w3schools.com/pHp/default.asp

3) https://www.codecademy.com/learn/learn-php

4) https://www.tutorialspoint.com/php/index.htm

5) https://www.learn-php.org

6) https://www.php.net/docs.php