Institute of Sciences, Humanities and Liberal Studies (ISHLS)
Prof. Disha H. Parekh

Subject code: IMCA0602
Course name: Open Source programming using PHP
Pre-requisites: Knowledge of OOPS Fundamentals
Credit points: 06
Offered: Integrated MCA   Semester number: 6th

Course Coordinator
Full Name: Prof. Disha H. Parekh and Prof. Madhavi Dave
Dishadoshi.mca@indusuni.ac.in
Consultation time: Mon – Fri: 3:00 pm to 4:30 pm

Course Lecturer
Prof. Disha H. Parekh
Main Building, Basement.
+91-9825709684
dishadoshi.mca@indusuni.ac.in
Consultation time: Mon – Fri:- 3:00 pm to 4:00 pm

Practical Facilitator
Prof. Madhavi Dave
Main Building, Basement.
+91-9925152713
madhavidave.mca@indusuni.ac.in
Consultation time: Mon – Fri:- 3:00 pm to 4:00 pm

Students will be contacted throughout the Session via Mail with important information relating to this Course.

Course Objectives
By participating in and understanding all facets of this Course a student will:

1) The purpose of this course is to give students an understanding of Client/Server architecture with their application tools.
2) It deals mainly with client server technologies used in the business as well as web based applications.
3) The course provides an introduction to the development of Web-based applications using PHP, MySQL, and Apache.
4) The course will focus on the PHP programming language.
5) This course also provides how to configure and use different CMS

Course Outcomes (CO)

1. After completion of the course students will able to program PHP application.
2. They will be able to create Database application.
3. Depth knowledge of various CMS

Course Outline

UNIT-I   [12 Hours]

Introduction to PHP and Control Structures

Introduction: Installation of PHP, PHP configuration in IIS & Apache Web Server and features of PHP, Understanding WAMP, How PHP code is parsed, Embedding PHP and HTML, Executing PHP and viewing in Browser, Data types, Operators, PHP variables: static and global variables and Comments in PHP.

Condition statements: If…Else, Switch, ? Operator, Loops, While, Break Statement, Continue, Do…While, For, For each, Exit, Die, Return, Arrays in PHP, FORM element, INPUT elements, Validating the user input, Passing variables between pages, Passing variables through a GET, Passing variables through a POST, Passing variables through a REQUEST.

UNIT-II [12 Hours]

Functions and Handling sessions and cookies

Built-in functions : String Functions: chr, ord, strtolower, strtoupper, strlen, ltrim, rtrim, substr, strcmp, strcasecmp, strpos, strrpos, strstr, stristr, str_replace, strrev, echo, print

Math Functions: abs, ceil, floor, round, fmod, min, max, pow, sqrt, rand

Date Functions: Date, getdate, setdate, Checkdate, time, mktime

Array Functions: count, list, in_array, current, next, previous, end, each, sort, rsort, assort, array_merge, array_reverse

File Handling Functions: fopen, fread, fwrite, fclose, file_exists, is_readable, is_writable, fgets, file, file_get_contents, file_put_contents, ftell, fseek, rewind, copy, unlink, rename

Miscelleneous Functions: define, constant, include, require, header, die

User Defined Functions, Concept of Session, Starting session, Modifying session variables, Unregistering and deleting session variable, Concept of Cookies, Handling of Cookies, How to upload files

UNIT-III [12 Hours]

PHP with Oops (object oriented programming)

Object Oriented Concepts: Understanding Object, Define a class, Class attributes, Creating an object, Object constructors & destructors, Class constants, Static method, Class inheritance, Abstract classes, Final keyword, Implementing Interface, Object serialization,

UNIT-IV [12 Hours]

Introduction of mySql

MySql Introduction: Installation of MySql, Types of tables in mySql, Query in mySql: select, insert, update, delete, Truncate, Alias, Order by, Backup and Restore, Database connectivity of PHP with mySql.

Method of delivery
Lectures – Board Work
Powerpoint presentation
Chart Preparation
Quiz organization
Group Discussions / Debate for self analysis

Study time
Lectures: 4 hours / week
Lab Sessions: 4 hours / week
Extra @ home / self learning: 4 hours / week

CO-PO Mapping (PO: Program Outcomes)
Program Outcomes:
Computer Applications Graduates will be able to:

PO1 **Computer knowledge:** Apply the knowledge of mathematics, science, computer fundamentals and specialization to the solution of complex problems.

PO2 **Problem analysis:** Identify, formulate, review research literature, and analyze complex computer science problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and computer sciences.

PO3 **Design/development of solutions:** Design solutions for complex computer science problems and design system components or processes that meet the specified needs with appropriate consideration for cultural, social environment.

PO4 **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5 **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern IT tools including prediction and modeling to complex activities with an understanding of the limitations.

PO6 **The digital youth and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional skill-set.

PO7 **Environment and sustainability:** Understand the impact of the professional computer science solutions in social and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8 **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the computer science practice.

PO9 **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10 **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11 **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12 **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Mapping of CO with PO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	1						1	1	1	3	4	
CO2	1	2	2	3	2	1	2	2			2	
CO3	2	3		2	3					2		3
CO4	1	4								4	3	2

Blooms Taxonomy and Knowledge retention(For reference)

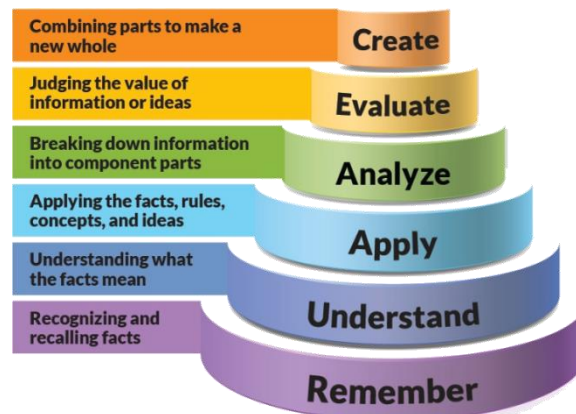(Blooms taxonomy has been given for reference)

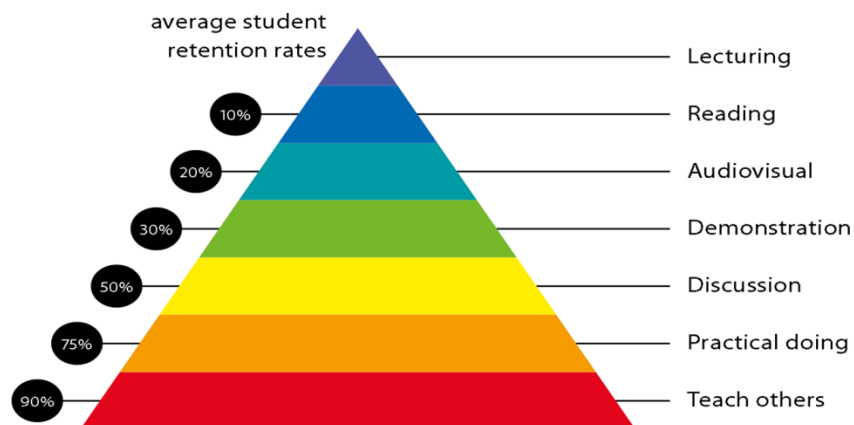**Figure 1: Blooms Taxonomy**

Figure 2: Knowledge retention

Graduate Qualities and Capabilities covered

(Qualities graduates harness crediting this Course)

General Graduate Qualities	Specific Faculty of Computer Graduate Capabilities
Informed Have a sound knowledge of an area of study or profession and understand its current issues, locally and internationally. Know how to apply this knowledge. Understand how an area of study has developed and how it relates to other areas.	**1 Professional knowledge, grounding & awareness**
Independent learners Engage with new ideas and ways of thinking and critically analyze issues. Seek to extend knowledge through ongoing research, enquiry and reflection. Find and evaluate information, using a variety of sources and technologies. Acknowledge the work and ideas of others.	**2 Information literacy, gathering & processing**
Problem solvers	**4 Problem solving skills**

Take on challenges and opportunities. Apply creative, logical and critical thinking skills to respond effectively. Make and implement decisions. Be flexible, thorough, and innovative and aim for high standards.	
Effective communicators	**5 Written communication**
Articulate ideas and convey them effectively using a range of media. Work collaboratively and engage with people in different settings. Recognize how culture can shape communication.	**6 Oral communication**
	7 Teamwork
Responsible	**10 Sustainability, societal & environmental impact**
Understand how decisions can affect others and make ethically informed choices. Appreciate and respect diversity. Act with integrity as part of local, national, global and professional communities.	

Practical work:

Sr. No	Practical Exercises (Outcomes in Psychomotor Domain)	Approx. Hours. Required
1	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	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 Using Switch statement.	2
13	Write PHP script to demonstrate File functions.	2
14	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	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	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

Lecture/tutorial times
(Give lecture times in the format below)

4 Lectures / week

2 Labs (2 hours each) / week

Attendance Requirements

The University Code of Practice Students states that it is the responsibility of students to attend all lectures, tutorials, seminars and practical work as stipulated in the Course outline. Attendance of practical work exercises is compulsory. In total 80% of attendance for both is mandatory.

Details of referencing system to be used in written work

https://phptherightway.com/

Text books

1. Stever Holzner, *"The complete Reference PHY"*, McGrow Hill

Additional Materials

1. Matt Doyle, *"Beginning PHP 5.3"*, Wrox Publication

2. Tim Converse, Joyce Park, ClarkMorgan, *"PHP 5.0 and MySql Bible"*, John Wiley & Sons

3. Steve Suehring, *"MySql Bible"*, John Wiley & Sons

4. Peter Moulding, "PHP Black Book"

ASSESSMENT GUIDELINES

Your final course mark will be calculated from the following:

Internal Assessment 1	40 Marks (Unit -1,2 and 3)	Objectives (1-2-3)	**60% in Total**
CIE – Assignment Evaluation	10 marks (5marks / assignment)	Objectives (1-4)	
CIE – MOOC / Workshop / Seminars / Quiz / Attendance	10 marks	Objectives (1-4)	
Final exam (*closed book*)	40 marks	Objectives (1-4) – **40%**	

SUPPLEMENTARY ASSESSMENT

Students who receive an overall mark of 35 or 36% will be considered for supplementary assessment in the semester concerned. The offer of supplementary assessment is not automatic and will be considered on a case by case basis. Precise form of supplementary assessment will be determined at the time the offer of a supplementary assessment is made. Students must make themselves available during the supplementary examination period to take up any offer of supplementary assessment.

Practical Work Report/Laboratory Journal:

A report on the practical work is due the subsequent week after completion of the class by each group.

Late Work

Late assignments will not be accepted without supporting documentation. Late submission of the reports will result in a deduction of 5% of the maximum mark per calendar day

Format

All assignments must be presented in a neat, legible format with all information sources correctly referenced. **Assignment material handed in throughout the year that is not neat and legible will not be marked and will be returned to the student.**

Retention of Written Work

Written assessment work will be retained by the Course coordinator/lecturer for two weeks after marking to be collected by the students.

University and Faculty Policies

Students should make themselves aware of the University and/or Faculty Policies regarding plagiarism, special consideration, supplementary examinations and other educational issues and student matters.

Plagiarism - Students should refer to the Indus University policy on Plagiarism available in the University Calendar. Plagiarism is not acceptable and may result in the imposition of severe penalties. Plagiarism is the use of another person's work, or idea, as if it is his or her own - if you have any doubts at all on what constitutes plagiarism, please consult your Course coordinator or lecturer. Plagiarism will be penalized severely and has led to expulsion from the University. Further information on plagiarism can be found in the Faculty Policy document.

Do not copy the work of other students.
Do not share your work with other students (except where required for a group activity or assessment)

.

Course schedule

Week #	Topic & contents	CO Addressed	Teaching Learning Activity (TLA)
Weeks 1	Unit – 1 Understand WAMP / XAMP and PHP code parsing	CO1, CO2, CO3 and CO4	Board work + PPT
Weeks 2	Unit – 1 Embedding of PHP and HTML	CO1, CO2, CO3 and CO4	Board work + PPT + Practical Implementation
Week 3	Unit – 1 Learning Control Structures and FORM Elements	CO1, CO2, CO3 and CO4	
Week 4	Unit – 1 Passing variables thru GET, POST and REQUEST methods	CO1, CO2, CO3 and CO4	Board work + PPT *Quiz*
Week 5	Unit – 1 Book / Assignment Submission	CO1, CO2, CO3 and CO4	Submissions
Week 6	Unit – 2 Built – in functions usage	CO1, CO2 and CO3	Board work + PPT
Week 7	Unit – 2 Creating Sessions and Cookies	CO1 and CO3	Board work + PPT
Week 8	Unit – 2 Book / Assignment Submission	CO1, CO2, CO3 and CO4	Submissions
Week 9	Unit – 3 Understanding OOPS Concepts and Fundamentals	CO1, CO2, CO3 and CO4	Board work + PPT
Week 10	Unit – 3 Implementing interfaces	CO1, CO2, CO3 and CO4	Board work + PPT
Week 11	Unit – 3 Implementing Abstract classes	CO1, CO2, CO3 and CO4	Board work + PPT
Week 12	Unit – 3 Book / Assignment Submission	CO1, CO2, CO3 and CO4	Submissions

	Week 13	Unit – 4 Introduction to MySQL	CO1, CO2, CO3 and CO4	Board work + PPT
	Week 14	Unit – 4 Using PHP and MySQL	CO1, CO2, CO3 and CO4	Board work + PPT
	Week 15	Unit – 4 Database Queries with PHP	CO1, CO2, CO3 and CO4	Board work + PPT
	Week 16	Unit – 4 Book / Assignment Submission	CO1, CO2, CO3 and CO4	Submissions

Dependency chart for Integrated MCA / M.Sc. (CA and IT):