# Marwadi University

## FACULTY OF COMPUTER APPLICATIONS
## Bachelor of Computer Applications

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- **Sem.** : 5
- **Subject Code** : 05BC1504
- **Subject** : Web Application Development – 1
- **Course Objectives**:

1. To learn PHP scripting language and deploying application on Apache Web Server.
2. To learn PHP Functions for web application development.
3. To design web application forms using cookies and session.
4. To be able to develop web application using MySQL database.
5. To apply different functionalities of JavaScript.

- **Prerequisites** : Fundamentals of Web, HTML & JavaScript

| Unit No | Topics Covered | No of lectures required |
|---------|----------------|-------------------------|
| 1 | **PHP Installation and Configuration:** Current version of PHP & MySQL, Apache Log file, PHP.INI file, XAMPP installation and basics of PHP scripts. **PHP Overview Flow control and building blocks:** Variables, Data types, Operators and expressions, Constants, Switching flow, Loops, Code blocks and browser Output. Comments, Include & require function | 08 |
| 2 | **Working with Functions, Arrays and Objects:** What is a function, Calling function, Defining a function, Returning values from User-defined functions, Variable scope, arguments, Testing for the existence of a function, What are Arrays, Creating arrays, Some array related functions **Working with Strings, Date and Time:** Formatting Strings with PHP, Investigating Strings in PHP, Manipulating Strings with PHP, Using Date and Time functions in PHP, Other String, Date and Time Functions. | 10 |
| 3 | **Working with Forms, Cookies and User Sessions:** Creating a Simple Input Form, Accessing Form Input with User-Defined Arrays, Combining HTML and PHP | 10 |

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| | Code on a Single Page, Using Hidden Fields to Save State, Redirecting the User, Working with File Uploads. Introducing Cookies, Setting a Cookie with PHP, Deleting a Cookie with PHP Session Function(s) Overview, Starting a Session, Working with Session Variables, Passing Session IDs in the Query String, Destroying Sessions and Un-setting Variables, Using Sessions in an Environment with Registered Users. | |
| 4 | **Interacting with MySQL** Learning the MySQL Data Types, Frequently used String functions in MySQL, Using Date and Time functions in MySQL, Using Transactions and Stored Procedures in MySQL. Interacting with MySQL using PHP, MySQL Versus MySQLi Functions, Connecting to MySQL with PHP, Working with MySQL Data, PHPMyAdmin interface. | 12 |
| 5 | **Apply JavaScript functionalities, Validations on forms** Java script conditional statements and loops, Dialog boxes, DOM, JavaScript User Define Function, JavaScript Built in Functions, Java Script form validations, JavaScript Event Handling, JavaScript Cookies | 10 |

**Course Outcomes:**

1. Students will be able to apply the Apache Web Server configuration and PHP Program Structure.
2. Students will be able to understand the concept of Web Application Design and development.
3. Students will be able to develop web application using opensource technologies like PHP & MySQL.
4. Students will be able to apply PHP scripting language and deploying web application on Apache Web Server.
5. Students will be able to design and develop dynamic website using JavaScript.

**Course Outcomes – Program Outcomes Mapping Table:**

|     | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| CO1 | L   | M   | H   | L   |     |     |     |     |
| CO2 |     |     |     |     | H   | H   |     |     |
| CO3 |     |     |     |     | M   | H   |     |     |
| CO4 |     |     |     |     | L   |     | H   |     |
| CO5 |     |     |     | H   |     |     |     | L   |

**Text Book      :**

1. "Sams Teach Yourself PHP, MySQL and Apache All in One", Julie C Meloni, Pearson Education, 4th edition.
2. "ELOQUENT JAVASCRIPT", Marijn Haverbeke, No Starch Press, 3rd Edition.
3. "jQuery Pocket Reference", David Flanagan, O'Reilly Media, 3rd Edition.

**Reference Books    :**

1. Beginning PHP 5.3, Matt Doyle, Wiley Publishing, Latest Edition.
2. PHP6 and MySQL Bible –Steve Suehring, Tim Converse and Joyce Park – Wiley India Edition, Latest Edition.
3. Head First PHP& MySQL by Lynn Beighley, Michael Morrison, O'Reilly Media, Latest Edition.
4. PHP & MySQL development – Luke Welling – Pearson Education, Latest Edition.
5. Web Technologies: HTML, JavaScript, PHP, Java, JSP ASP.Net, XML and AJAX Black Book - Kogent Learning Solutions – Dream tech Press, Latest Edition

**Web References:**

1. **https://www.codecademy.com/learn/learn-php**
2. **https://www.guru99.com/php-tutorials.html**

**App References:**

1. **Udemy**
2. **Tutorialspoint**
3. **SoloLearn**

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**Syllabus Coverage from Text book & web/app reference:**

| Unit # | Chapter Numbers |
|--------|-----------------|
| 1 | Ref Book-1: Chapter 5 & 6 |
| 2 | Ref Book-1: Chapter 7,8 & 10 |
| 3 | Ref Book-1: Chapter 11 & 12 |
| 4 | Ref Book-1: Chapter 15,16,17 & 18 |
| 5 | Ref Book-2: Chapter 1,2,3 & 14 & Ref Book-3: Chapter 5 |

# PRACTICALS

| U ni t N o | List of Practical |
|---|---|
| 1 | 1. Write a PHP program for print Previous semester Result using variables & constants in PHP.<br>2. Write a PHP program to find out maximum and minimum number<br>3. Write a PHP program for operators in PHP.<br>4. Write a PHP program to print current month using if..else& switch case.<br>5. Write a PHP programto print 5 to 10 using For and ForEach.<br>6. Write a PHP program to print 15 to 20 using While and Do While.<br>7. Write a PHP programto include a file using include and require function<br>8.Write a PHP Program to perform following operation on Array where values in array are entered by user<br>a) Print the values of array.<br>b) Reverse an array.<br>c) merge two arrays in sorted manner.<br>d) add values of all elements of an array. |
| 2 | 2.1 Write a PHP code to create numeric array for Monday to Saturday, associative array for month with total days of month such as January=>30,February=>28 upto December and multidimensional array for laptop along with company name inside that model and price(any two companies).<br>2.2 Write a PHP code for sorting an array entered by user.<br>2.3Write a program to perform following array functions:<br>1 array_change_key_case($var, CASE_LOWER/CASE_UPPER).<br>2 array_chunk($var,size) //array of months<br>3 array_count_values()<br>4 array_combine()<br>5 array_pop()<br>6 array_push()<br>7 array_unshift()<br>8 array_shift().<br><br>2.4<br>1 strlen() // any string<br>2 strpos() //find some specific word,letter<br>3 str_word_count()<br>4 strrev()<br>5 str_replace()<br>6 strtolower()<br>7strtoupper()<br><br>2.5 Write a PHP code for Type casting with settype, gettype functions.<br>2.6 Write a PHP code for user define function for calculator, take input from |

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| | user by creating simple html form.<br>2.7 Write a PHP code to use mysql string manipulation functions as given bellow:<br>Length(),concat(),concat_ws(),trim(),rtrim(),ltrim(),lpad(),rpad(),locate(),strstr(),substr(),lcase(),ucase(),repeat(),replace().<br>2.8 Write a PHP code to use mysql date and time functions as given bellow:<br>DAYOFWEEK(),WEEKDAY(),DAYOFMONTH(),DAYOFYEAR(),DAYNAME(),MONTH(),MONTHNAME(),WEEK(),NOW(),SYSDATE(),CURRENT_TIMESTAMP()<br>2.9 Write a PHP code to use mysql date and time functions as given bellow:<br>HOUR(),MINUTE(),SECOND(),DATE_FORMAT(),DATE_SUB(),DATE_ADD(),CURDATE()/CURRENT_DATE,CURTIME()/CURRENT_TIME(),UNIX_TIMESTAMP(),<br>FROM_UNIXTIME(). |
| **3** | 3.1 create cookie<br>3.2 read cookie<br>3.3 use cookie with header<br>3.4 delete cookie<br>3.5 create session<br>3.6 destroy session<br>3.7 Create a session when the user log in using the form of Practical 12. Provide an option to logout. Once the user logs out then he/she should not be able to open the home page using the URL.<br>3.8 Create a php script which will store a cookie on the client's device to identify whether the user is a new one or a repeated one.<br>3.9 Create a php script which will help the user to remember his/her username and password on the login form.<br>3.10 Write a php script to store the details of a registration form into the users table of a database. |
| **4** | 4.1 Database connection<br>4.2 Create a MySQL Table Using MySQLi and PDO<br>4.3 Insert Data Into MySQL Using MySQLi and PDO<br>4.4 Demo of PHP MySQL Prepared Statements<br>4.5 Select Data From a MySQL Database<br>4.6 Delete Data From a MySQL Table Using MySQLi and PDO<br>4.7 Update Data In a MySQL Table Using MySQLi and PDO<br>4.8 Limit Data Selections From a MySQL Database<br>4.9 Write a php script to authenticate the user using a login form where the user will provide a username and password. Find these username and password in the users table to see if the user is registered or not. If yes then take him to the home page otherwise give an error message.<br>4.10 Write a php script to provide an edit profile page to the user where he/she can see the existing details and if he/she wants to change details then he/she can change them.<br>4.11 Write a php script to list all the registered users in a table. Provide an option "Delete" with each row of the table so that if the user wants to delete an entry then he/she can. |
| **5** | 5.1 Create web page with javascript to display alert message. (use variable)<br>5.2 Create web page with javascript to prompt for some value at run time from user and display on page.<br>5.3 Create web page with javascript to fetch any value at runtime and |

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| | | display whether it's odd or even. |
| | 5.4 | Create web page with javascript to fetch any name at runtime and display that names 10 times using suitable loop. |
| | 5.5 | Create web page with javascript to perform login authentication check process using UDF. |
| | 5.6 | Create web page with javascript to store and retrieve any value using Cookie. |
| | 5.7 | Create an HTML registration form along with validation to restrict user to submit blank input box. |
| | 5.8 | Create an HTML registration form along with validation to check password strength (Show Live Status Of password Strength). If length is less than 6 then do not allow user to submit form. |
| | 5.9 | Write a java script to redirect request based on button click. |
| | 5.10 | Write a java script to pop up different types of alert/message/warning/information window on screen (on button click) |
| | 5.11 | Write a simple javascript inside the PHP code to display alert box. |
| | 5.12 | Write a java script to perform any arithmetic operation using Prompt. (Attach External JavaScript file) |