GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Master of Business Administration

Level: PG

Branch: Information Technology

Course / Subject Code: MB02096031

Course / Subject Name : Web Programming Using PHP

w. e. f. Academic Year:	2024-25
Semester:	2
Category of the Course:	Core Course (CC)

Prerequisite:	UG Level Course
Rationale:	PHP, a widely-used server-side scripting language, enables the creation of dynamic and interactive web applications. Understanding PHP empowers IT managers to oversee web development projects effectively, ensuring they meet business objectives. It also facilitates better communication with technical teams, improving project outcomes. With businesses increasingly relying on web technologies, knowledge of PHP provides a competitive edge, aiding in strategic decision-making, optimizing web-based solutions, and enhancing digital transformation initiatives within organizations. This integration of technical and managerial skills is essential for driving innovation and efficiency in the IT landscape.

Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	Understand the concepts of PHP like Functions, Strings, Arrays, and objects.	U
02	Understand the concept of Web Techniques and Form Handling using PHP	U
03	Develop Web Applications using AJAX and PHP:	C
04	Accessing NoSQL Databases using PHP and Working with XML and PHP	A

**Revised Bloom's Taxonomy (RBT)*

Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
				Theory		Tutorial / Practical		
L	T	PR	C	ESE (E)	PA / CA (M)	PA/CA (I)	ESE (V)	
3	1	0	4	70	30	50	0	150

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	**Introduction and Working with PHP:** Overview of Open Source Software, Installation & Configuration of PHP. **Introduction to PHP:** **PHP language Basics:** Lexical Structure, Data types, Variables, Super Global Variables, Types of Comments, Expressions and Operators, Control and Looping statements. **Functions:** Function Definition, Function Parameters, Returning Values. **Strings:** Usages and String Functions. **Arrays:** Types of Arrays and its Usages, Array functions. **Objects:** Declaring Class, Properties, Methods, **Exception Handling**: Try, throw and catch keywords with Examples.	12	25
2.	**Web Techniques and Form Handling using PHP**: **Basics of Web:** HTTP & HTTP2 Basics, Processing Forms, HTTP GET and POST Method, Setting Response Headers. **State Management Techniques in PHP:** Query String, Hidden Form Controls, Cookies, Session. **PHP Regex:** Form validation using Regular Expressions.	11	25
3.	**Accessing Relational Databases using PHP and Responsive Web Application Development using AJAX and PHP:** **Relational Database and PHP:** Using PHP to access Databases, Relational Databases and SQL, PHP Data Objects (PDO), MySQLi (Object Oriented Interface and Procedural Interface), CRUD Operation in PHP. **Introduction to AJAX:** PHP and AJAX Example, AJAX Suggest and Auto complete, AJAX Data Grid. **Introduction to PHP Web Sockets:** Introduction to Web Socket, Full Duplex Chat Application Example	11	25
4.	**Accessing NoSQL Databases using PHP and Working with XML and PHP:** **Introduction to No SQL Databases:** Overview of NoSQL Data Models, Key-Value Database Systems, Document Oriented Database Systems, Column-Family Database Systems. No SQL and PHP CRUD Operation.	11	25

	Introduction to MongoDB Database: MongoDB Database and its configuration, MongoDB Basics, Accessing MongoDB database using PHP and CRUD Operations. **Introduction to XML:** Introduction to XML, Generating XML, Parsing XML, Parsing XML with DOM, parsing with SimpleXML, Transforming XML with XSLT. **Introduction to Web Services:** Introduction to REST Clients, XML – RPC.		
5.	Web Techniques and Form Handling using PHP Accessing Relational Databases using PHP Accessing NoSQL Databases using PHP Working with XML and PHP Responsive Web Application Development using AJAX and PHP	15	
	Total	**60**	**100**

Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (in %)					
R Level	**U Level**	**A Level**	**N Level**	**E Level**	**C Level**
20	30	25	10	10	5

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

References/Suggested Learning Resources:

(a) Books:

1. Kevin Tatroe, Peter MacIntyre, Rasmus Lerdorf: Programming PHP - Creating Dynamic Web Pages, 3rdEdition, Kindle Edition, O'REILLY Publication.
2. David Sklar and Adam Trachtenberg: PHP CookBook - Solutions and Examples for PHP Programmers, 3rdEdition, O'REILLY Publication.
3. Christian Darie, Brinzarea Bogdan, Filip Chereches-Tosa, Mihai Bucicia: AJAX and PHP: BuildingResponsive Web Applications, Kindle Edition, Packt Publishibng.
4. Matt Doyle: Beginning PHP 5.3, Wrox Publication, 2010.
5. Steve Francia: MongoDB and PHP, O'Reilly Media Publication.

(b) Open source software and website:

1. https://web-algarve.com/books/MySQL%20&%20PHP/PHP%20Cookbook,%203rd%20Edition.pdf

[PHP basics and Examples]

2. https://www.w3schools.com/pHP/default.asp [For Basics of PHP]
3. https://www.tutorialspoint.com/php/index.htm [For State Management techniques]
4. https://www.php.net/manual/en/index.php [Official PHP Manual]

Mooc:

- Charles Russell Severance: Web Applications for Everybody University of Michigan:www.coursera.org/specializations/web-applications

CO- PO Mapping:

Semester 2	**Course Name: Web Programming using PHP**				
	POs				
Course Outcomes	PO1	PO2	PO3	PO4	PO5
CO1	3	2	1	1	2
CO2	3	2	1	1	2
CO3	3	2	1	1	2
CO4	3	2	1	1	2

*Legend: '**3**' for high, '**2**' for medium, '**1**' for low and '**-**' for no correlation of each CO with PO.*

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