



Programme	B.Sc. IT Honours (Cyber Security)					Branch	Computer Applications		
Semester	IV					Version	1.0.0.0		
Effective from Academic Year			2025-26			Effective for the batch Admitted in		June 2024	
Subject code	U64A3WAD		Subject Name			WEB APPLICATION DEVELOPMENT			
Teaching scheme						Examination scheme (Marks)			
(Per week)	Lecture (DT)		Practical (Lab.)		Total		CCE	SEE	Total
	L	TU	P	T W					
Credit	2	-	2	-	4	Theory	50	50	100
Hours	2	-	4	-	6				

**Objective:**

To provide awareness and skill of web development through standard concept.

**Pre-requisites:**

One should have knowledge of PHP, Web Application, its Components and Cyber Security Concept

**Learning Outcome:**

Name of CO	Description
CO1	Understand the fundamentals of PHP, including syntax, data types, operators, and control structures.
CO2	Apply object-oriented programming concepts such as classes, objects, constructors, destructors, inheritance, polymorphism, and encapsulation in PHP.
CO3	Implement advanced PHP features such as file handling, session management, cookies, and exception handling to develop dynamic web applications.
CO4	Establish database connectivity with MySQL, perform CRUD operations, and build interactive forms using PHP and MySQL.
CO5	Identify common web security vulnerabilities (SQL Injection, XSS, CSRF) and apply input validation, sanitization techniques, and penetration testing tools for securing PHP applications.

**Mapping of CO and PO:**

Cos	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2	2	1	2	1	1	1	1	1	1	1
CO2	3	3	3	2	3	1	1	1	1	1	1	2
CO3	3	3	3	2	3	3	2	2	2	3	2	2
CO4	2	3	3	3	3	3	2	2	2	3	2	2
CO5	2	3	3	3	3	3	2	3	3	3	3	3

**Content:**

Unit	Content	Hrs.
1	<b>Getting Started with PHP:</b> <ul style="list-style-type: none"> <li>Introduction to PHP</li> <li>Setting up a Development Environment (XAMPP/WAMP)</li> <li>PHP Syntax, Variables, Constants</li> <li>Data Types and Operators</li> </ul>	06
2	<b>Object-Oriented Programming in PHP:</b> Conditional Statements (if, if-else, switch-case), Loops (for, while, do-while foreach), Functions and Arrays, Classes and Objects, Constructors and Destructors, Inheritance, Polymorphism and Encapsulation.	06

3	<b>Advanced PHP for Web Development:</b> File and File system Function, Session, Cookies, Exception and Error Handling	06
4	<b>Database Connectivity using MySQL PHP/MySQL:</b> Connection, PHP/MySQL Connection and function, Display Query in tables, Building forms from queries.	06
5	<b>Web Pen testing Fundamentals in PHP</b> <ul style="list-style-type: none"><li>Understanding common web application vulnerabilities:<ul style="list-style-type: none"><li>SQL Injection</li><li>Cross-Site Scripting (XSS)</li><li>Cross-Site Request Forgery (CSRF)</li></ul></li><li>Input validation and sanitization techniques</li><li>Tools and techniques for web penetration testing</li></ul> Using tools like OWASP ZAP, Burp Suite, etc.	06
<b>Practical Content:</b>		
List of programs specified by subject teacher based on above mention topics.		
<b>Reference Books:</b>		
1	The Complete Reference PHP 1st edition by Steven Holzner, TATA McGraw-Hill Publication	
2	Learning PHP Data Objects, 1st Edition by Dennis Popel, Packet Publishing	
3	"PHP Security: A Guide to Building Secure Web Applications" by Chris Shiflett	
<b>Web Reference:</b>		
1	<a href="https://www.javatpoint.com/php-tutorial">https://www.javatpoint.com/php-tutorial</a>	
2	<a href="http://www.dvwa.co.uk/">http://www.dvwa.co.uk/</a>	
3	<a href="https://owasp.org/">https://owasp.org/</a>	
<b>MOOC/Certificate Course:</b>		
1	<a href="https://www.coursera.org/courses">https://www.coursera.org/courses</a>	
2	<a href="https://www.eccouncil.org/cybersecurity-exchange/cyber-novice/free-cybersecurity-courses-beginners">https://www.eccouncil.org/cybersecurity-exchange/cyber-novice/free-cybersecurity-courses-beginners</a>	
3	<a href="https://www.udemy.com/topic/web-development">https://www.udemy.com/topic/web-development</a>	
<b>Question Paper Scheme:</b>		
	<b>End Semester Examination Duration:</b> (2 Hours Theory Examination)  <b>Note for Examiner: -</b> Q-1 Any Five out of Seven (25 Marks) Q-2 Any Two out of Three (06 Marks) Q-3 Mandatory question (05 Marks) Q-4 Any Two out of Three (08 Marks) Q-5 Any Two out of Three (06 Marks)  *The question paper must comprehensively address all Course Outcomes (COs), align with Bloom's Taxonomy levels, and ensure complete syllabus coverage.	