



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Web Application Development		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	CYS261		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	2	Semester of Delivery	
Administering Department	Dept. of Cybersecurity	College	College of Information Technology
Module Leader	Dr. Ahmad AlSabhany	e-mail	Ahmad.alsabhany@uofallujah.edu.iq
Module Leader's Acad. Title	Asst. Prof.	Module Leader's Qualification	Ph.D.
Module Tutor	Dr. Ahmad AlSabhany	e-mail	Ahmad.alsabhany@uofallujah.edu.iq
Peer Reviewer Name	Dr. Senan Ali Abd	e-mail	senan.a.abd@uofallujah.edu.iq
Scientific Committee Approval Date	25-5-2026	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	The module builds upon the web pages design knowledge and skills acquired in Web Design CYS231. 1. Develop a solid understanding of dynamic web application development using PHP. 2. Design and implement database-driven web applications using PHP and MySQL. 3. Apply object-oriented programming techniques in web application development. 4. Implement common web application features, including forms, file handling, sessions, and authentication. 5. Apply fundamental web security practices in PHP applications. 6. Develop complete web applications that meet specified functional requirements. 7. Prepare students for Open Source Web Development and advanced web technologies.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Develop dynamic web pages using PHP. 2. Design and implement database-driven web applications using PHP and MySQL. 3. Apply object-oriented programming concepts in PHP applications. 4. Implement forms, file handling, sessions, and user authentication mechanisms. 5. Apply basic security measures to protect web applications from common vulnerabilities. 6. Develop and deploy a complete database-driven web application.
Indicative Contents المحتويات الإرشادية	● Introduction to Dynamic Web Applications ● PHP Syntax and Program Structure ● Variables, Data Types, Operators, and Control Structures ● Functions and Modular Programming ● Arrays and Data Processing ● Reusable Page Components and PHP Includes ● Form Processing and User Input Handling ● File Handling and File Uploads ● Object-Oriented Programming in PHP ● Database Connectivity with MySQL ● SQL Queries and Database Operations ● CRUD Application Development ● Sessions, Cookies, and State Management

	• User Authentication and Authorization • Advanced PHP Features and Database Integration • Search, Filtering, and Reporting Functions • Web Application Security Fundamentals • Input Validation and Data Sanitization • Protection Against SQL Injection and Cross-Site Scripting (XSS) • Testing, Deployment, and Maintenance of Web Applications • Complete Database-Driven Web Application Development
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Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The module is delivered through lectures, laboratory sessions, practical programming exercises, and project-based learning activities. Students develop web application development skills through hands-on PHP and MySQL programming, database integration, and secure coding practices. A semester-long project is developed progressively throughout the course, allowing students to incrementally implement database operations, sessions, authentication, security controls, and advanced application features as new concepts are introduced. Laboratory activities emphasize practical problem-solving, testing, debugging, and the development of complete database-driven web applications.
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Student Workload (SWL)

الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	63	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	62	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	125		

Module Evaluation

تقييم المادة الدراسية

	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
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Formative assessment	Assignments	2	10% (10)	5 and 10	All
	Quiz	1	10% (10)	4	LO #1 - #3
	Quiz (Lab.)	1	10% (10)	9	LO #4 - #6
	Project	1	10% (10)	13	All
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #3
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Dynamic Web Applications and PHP Syntax
Week 2	Variables, Data Types, Operators, and Control Structures
Week 3	Functions, Arrays, Modular Programming, and Reusable Page Components in PHP
Week 4	Form Processing and User Input Handling
Week 5	File Handling, File Uploads, and Server-Side Data Processing
Week 6	Object-Oriented Programming in PHP
Week 7	PHP and MySQL Integration
Week 8	Midterm Examination
Week 9	Database Operations: CRUD Applications
Week 10	Project Development I: Application Design and CRUD Implementation
Week 11	Project Development II: Sessions, Cookies, and State Management
Week 12	Project Development III: User Authentication and Authorization
Week 13	Project Development IV: Advanced PHP Features and Database Integration
Week 14	Project Security and Feature Enhancement: SQL Injection and XSS Prevention
Week 15	Project Testing, Maintenance, Deployment, and Presentation

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي المختبر

	Material Covered
Week 1	Installing PHP Environment and Creating Basic PHP Pages
Week 2	Variables, Operators, Conditional Statements, and Loops in PHP
Week 3	Functions, Arrays, Includes, and Reusable Page Components
Week 4	HTML Forms and User Input Processing with PHP

Week 5	File Handling, File Uploads, and Data Processing
Week 6	Creating Classes and Objects in PHP
Week 7	Connecting PHP Applications to MySQL Databases
Week 8	Midterm Practical Assessment
Week 9	Building CRUD Applications with PHP and MySQL
Week 10	Project Development I: Application Structure and CRUD Implementation
Week 11	Project Development II: Sessions, Cookies, and User State Management
Week 12	Project Development III: User Authentication and Authorization
Week 13	Project Development IV: Search, Filtering, Reporting, and Database Features
Week 14	Securing the Project Against SQL Injection and XSS
Week 15	Project Testing, Deployment, and Presentation
Week 16	Project Seminars

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1. Nixon, R. (2024). <i>Learning PHP, MySQL & JavaScript</i> (7th ed.). O'Reilly Media.	Yes
Recommended Texts	1. Welling, L., & Thomson, L. (2023). <i>PHP and MySQL Web Development</i> (6th ed.). Addison-Wesley.	Yes
Websites	1. PHP Official Documentation – https://www.php.net/docs.php 2. MySQL Official Documentation – https://dev.mysql.com/doc/ 3. W3Schools PHP Tutorial – https://www.w3schools.com/php/	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.