MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Web Development**			**Module Delivery**	
Module Type	**Basic**			☒ **Theory** ☐**Lecture** ☒ **Lab** ☐ **Tutorial** ☐**Practical** ☐ **Seminar**	
Module Code	**UOMU0302061**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	3		**Semester of Delivery**	6	
Administering Department	الأنظمة الطبية الذكية		**College**	العلوم	
Module Leader			**e-mail**		
Module Leader's Acad. Title	Assistant Professor		**Module Leader's Qualification**	Ph.D.	
Module Tutor			**e-mail**		
Peer Reviewer Name	ا.د مهدي عبادي مانع		**e-mail**	mahdi.ebadi@uomus.edu.iq	
Scientific Committee Approval Date	1/10/2024		**Version Number**	2.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	UOMU0302054	**Semester**	5
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. To describe several tools and/or techniques involved in developing professional-level websites. 2. To compare and contrast those tools and/or techniques while analyzing their appropriateness for solving specific problems. 3. To understand one or more of the tools deemed appropriate for a given task well enough to deploy and utilize those tools in implementing solutions to specific problems. 4. To evaluate the effectiveness of those solutions. 5. To create a fully functioning website. 6. To understand how to upload websites to a web server. 7. To be familiar with different web design theories and understand web terminology.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Understand the fundamental concepts and principles of web programming. 2. Demonstrate proficiency in HTML, CSS, and JavaScript to create interactive and dynamic web pages. 3. Apply web design principles and user experience (UX) considerations to create visually appealing and user-friendly websites. 4. Utilize server-side programming languages (such as PHP, Python, or Ruby) to handle data processing and server interactions. 5. Implement database integration and management for web applications. 6. Develop secure web applications by implementing appropriate authentication and authorization mechanisms. 7. Employ modern web development frameworks and tools to streamline the web development process. 8. Optimize web applications for performance, responsiveness, and scalability. 9. Troubleshoot and debug web applications to identify and resolve programming errors. 10. Stay up to date with emerging trends and technologies in web programming.
Indicative Contents المحتويات الإرشادية	**1. Introduction to Advanced Web Development** Overview of the current state and trends in web technologies, Importance of open-source solutions in web development **2. Client-side Technologies** Advanced HTML techniques and best practices, CSS frameworks and responsive design, and JavaScript libraries and frameworks for interactive web experiences **3. Server-side Technologies**

	Server-side scripting languages (e.g., PHP, Python, Node.js), Relational and non-relational databases for web applications, and RESTful API development and integration **4. Efficient Web Development Techniques** Performance optimization strategies (e.g., caching, compression), front-end build tools (e.g., task runners, module bundlers), and version control systems for collaborative development **5. Historical Evolution of the Web** Understanding the evolution of web technologies and standards, and impact of major milestones on web development practices **6. Planning and Designing a Web Page** Information architecture and wireframing, visual design principles and color theory, and prototyping tools and techniques **7. Development of Personal Web Projects** Applying learned concepts and techniques to create a personal web page, iterative development process and project management, and incorporating feedback and making improvements **8. Critical Thinking and Class Interactions** Engaging in discussions and debates on web development topics, analyzing case studies and real-world examples, and evaluating and providing constructive feedback on classmates' projects

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	This Module involves hands-on practice, step-by-step guidance, interactive coding sessions, group projects, code review and feedback, comprehensive resources and documentation, practical examples and case studies, problem-solving exercises, assessments and quizzes, and promoting continuous learning. These strategies aim to provide students with a solid foundation in HTML, CSS, and other web design requirements, enabling them to develop websites from scratch and build functional web applications.

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

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	
	Seminar	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	3 hr	10% (10)	7	LO # 1-7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction, Syllabus, Calendar, Terminology, Files and Folders, Domain/Hosting, Remote Hosting, Server Configuration, starting a Website, Required Tools Installing
Week 2	Relational Database Schema, Diagram, SQL DDL Scripts, SQL DML Scripts (Sample Data), University Site Map
Week 3	Understanding the basics of HTML, CSS, PHP, and MySQL, build web forms, handle form submission, interact with databases, and manage user sessions for authentication purposes.
Week 4	User management concepts, password management, working with database operations, handling form submissions, and implementing secure practices for password handling and reset processes.

Week 5	Account activation processes, user profile management, handling form submissions, performing database operations for user records, and implementing validation and security measures to ensure data integrity and user authentication.
Week 6	Working with databases, form handling, data validation, and database operations for adding new records
Week 7	Mid-exam
Week 8	Working with databases, form handling, data validation, and database operations for updating and deleting records. Data integrity and user confirmation for critical operations like deletion.
Week 9	Database interactions, form handling, data validation, and database operations for adding new records. Data modeling and database schema design to ensure the proper structure for storing course information.
Week 10	Database interactions, form handling, data validation, and database operations for updating and deleting records. Data integrity, user permissions, and handling confirmation dialogs for critical actions.
Week 11	Database operations, form handling, data validation, user interactions, and security considerations when updating or deleting course records. Hands-on experience in implementing these functionalities within a web programming context.
Week 12	Database operations, form handling, data validation, user interactions, and security considerations when updating or deleting student records. Hands-on experience in implementing these functionalities within a web programming context.
Week 13	Web Application Development and Practical Implementation: Knowledge and Strategies I
Week 14	Web Application Development and Practical Implementation: Knowledge and Strategies I
Week 15	Web Application Development and Practical Implementation: Knowledge and Strategies III

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	index.html, common.css, MySQLConnection.php, SignUpForm.php, SignUp.php, SignIn.html, SignIn.php, SignOut.php
Week 2	RoleList.php, UserList.php, PasswordChangeForm.php, PasswordChange.php, PasswordResetForm.php., PasswordReset.php
Week 3	UserActivateForm.php, UserActivate.php, UserUpdateForm.php, UserUpdate.php
Week 4	MajorList.php, MajorAddForm.php, MajorAdd.php
Week 5	Mid-term Exam
Week 6-7	MajorUpdateForm.php, MajorUpdate.php, MajorDeleteForm.php, MajorDelete.php

Week 8-9	CourseList.php, CourseAddForm.php , CourseAdd.php
Week 10-11	CourseUpdateForm.php, CourseUpdate.php, CourseDeleteForm.php , CourseDelete.php
Week 12-13	CourseUpdateForm.php, CourseUpdate.php, CourseDeleteForm.php , CourseDelete.php
Week 14-15	StudentUpdateForm.php, StudentUpdate.php , StudentDeleteForm.php , StudentDelete.php

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	• PHP and MySQL Web development / Luke Welling, Laura Thomson. -- 4th ed. • Steven A. Gabarro, Web Application Design and Implementation, Wiley, 2006 • Programming the World Wide Web by Robert W. Sebesta 4th Edition	Yes
Recommended Texts	Web Applications: Concepts and Real World Design by Craig Nuckles Latest Edition	Yes
Websites	• https://www.w3schools.com/ • https://www.sololearn.com	

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.