MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Mobile Applications**			**Module Delivery**	
Module Type	**Elective**			☒ **Theory** ☒ **lab**	
Module Code	**IT4103**				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	UGIIII		**Semester of Delivery**	1	
Administering Department	Information Technology		**College**	College of Computer Science and Information Technology	
Module Leader	Zakaria Hussein Ali		**e-mail**	zakariya.hussein@uowa.edu.iq	
Module Leader's Acad. Title	Asst. Lecturer		**Module Leader's Qualification**	**MSc**	
Module Tutor	Zakaria Hussein Ali		**e-mail**	zakariya.hussein@uowa.edu.iq	
Peer Reviewer Name	Asst. Lecturer Nabeel Sadiq Abdel Abbas		**e-mail**	nabeel.alshreefy@uowa.edu.iq	
Scientific Committee Approval Date	01/09/2026		**Version Number**	V1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	IT342	**Semester**	6
Co-requisites module	-	**Semester**	-

Department Head Approval **Dean of the College Approval**

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	"This course aims to provide students with a comprehensive understanding of mobile application development. Students will learn about the history of mobile app development, various mobile platforms and their architectures, cross-platform app development, server-side programming, performance optimization, user interface design, integration with the camera and documents, as well as 2D graphics and animations. By the end of the course, students will acquire the knowledge and skills necessary to design, develop, and deploy mobile applications across different platforms."
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	"Upon successful completion of this module, students will be able to: 1. Explain the history, evolution, and global scope of mobile application development. 2. Compare and evaluate different mobile app development environments, platforms, and architectures. 3. Design and develop mobile applications for various platforms, including iOS, Android, and the web. 4. Implement server-side applications and utilize appropriate notification mechanisms for mobile apps. 5. Evaluate and optimize mobile application performance using suitable techniques. 6. Design and enhance user experience through effective UI design and gesture implementation. 7. Integrate device features, including the camera and document interactions, into mobile applications. 8. Create and animate 2D graphics across various mobile devices and operating systems."

Indicative Contents المحتويات الإرشادية	"The content of this module covers the following areas: 1. Understanding the history and global scope of mobile app development, including an introduction to mobile application development and its evolution. 2. Comparing and evaluating different mobile app development environments and architectures, including mobile application architectures and UI components. 3. Designing and developing mobile applications for various platforms, such as iOS, Android, and the web, with a focus on cross-platform mobile development, mobile web apps, hybrid web apps, and cross-compilation. 4. Implementing server-side applications and utilizing notification mechanisms, including servers, notifications, and server-side programming for mobile apps. 5. Evaluating and optimizing mobile application performance through performance assessment and tuning techniques. 6. Enhancing user experience through effective UI design and gesture implementation, including text, styling, image rendering, and modern UI design tools. 7. Integrating device features, such as the camera and document interactions, into mobile applications, including accessing device features via SDKs,

	camera and microphone integration, device state implementation, cross-platform app support and compatibility, and document interaction management. 8. Creating and animating 2D graphics across various mobile devices and operating systems."

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	"The teaching and learning strategy for this module combines theoretical lectures with practical lab sessions, hands-on programming activities, demonstrations, discussions, problem-solving exercises, and project-based learning. This strategy emphasizes the practical application of theoretical concepts, encouraging students to develop their analytical, design, and coding skills through both individual and collaborative activities. Throughout this module, students will be guided and supported to achieve the following: 1. Understand the history and global scope of mobile application development. 2. Compare and evaluate different mobile app development environments and architectures. 3. Design and develop mobile applications for various platforms, including iOS, Android, and the web. 4. Implement server-side applications and utilize notification mechanisms. 5. Evaluate and optimize mobile application performance. 6. Enhance user experience through effective UI design and gesture implementation. 7. Integrate device features, such as the camera and document interactions, into mobile applications. 8. Create and animate 2D graphics across various mobile devices and operating systems."

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ 15 اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	65	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	85	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation التقييم التكويني للطالب					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
	H.W	**5**	**2 (10%)**	**3,5,7,9,11**	**1,2,3,4**
	Quizzes	**5**	**2 (10%)**	**2,4,6,8,10**	**all**
	Lab	**5**	**3 (15%)**	**all**	**all**
	Projects	**1**	**5 (5%)**	**12**	**all**
Summative assessment	**Midterm Exam**				
	Final Exam				
Total assessment		**100% (100 Marks)**			

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	• Introduction to Mobile Application Development
Week 2	• Mobile Application Development Environments
Week 3	• Mobile Application Architectures and UI Components
Week 4	• Cross-Platform Mobile Application Development
Week 5	• Mobile Web Application Development
Week 6	• Hybrid Web Applications and Cross-Compilation
Week 7	• Servers, Notifications, and Server-Side Programming
Week 8	• Performance Evaluation and Optimization
Week 9	• Text, Formatting, and Image Rendering
Week 10	• User Interface Design and Modern UI Design Tools
Week 11	• Accessing Device Features via Software Development Kits (SDKs)
Week 12	• Cross-Platform Compatibility and Support
Week 13	• Camera, Microphone, and Mobile Device State Implementation
Week 14	• Managing Document Interactions
Week 15	• 2D Graphics and Animation on Mobile Devices

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	• Setting Up the Development Environment
Week 2	• Exploring Mobile Architectures and UI Components
Week 3	• Building a Simple Mobile App (iOS)
Week 4	• Building a Simple Mobile App (Android)
Week 5	• Developing a Mobile Web Application
Week 6	• Implementing Hybrid Web Applications
Week 7	• Server-Side Programming for Mobile Applications
Week 8	• Evaluating Mobile Application Performance
Week 9	• Optimizing Text and Image Rendering

Week 10	• Enhancing UI Design and Color Palette Tuning
Week 11	• Accessing Device Features via Software Development Kits (SDKs)
Week 12	• Implementing Cross-Platform Compatibility and Support
Week 13	• Implementing Cross-Platform Compatibility and Support (Continued)
Week 14	• Handling Camera and Microphone Streams
Week 15	• Managing Mobile States and Implementing Stateful Applications

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts		No
Recommended Texts		No
Websites		

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.