UNIVERSITI UTARA MALAYSIA

SCHEME OF WORK (SECOND SEMESTER 2021/2021) (A212)

Lecturer's Name: AHMAD HANIS MOHD SHABLI **Course:** STIW2044 MOBILE PROGRAMMING

WEEK/ DATE	TOPIC SUB-TOPIC	LO	HOUR	METHOD	AVA	REMARKS
1 27/3/2022 – 2/4/2022	1. Introduction to Mobile Programming 1.1 Evolution of mobile devices. 1.2 Mobile devices characteristic. 1.3 Mobile devices operating system. 1.4 The Ecosystem of Mobile Application Case study.	Students will be able to ° Introduction to Mobile devices technology and mobile application. ° Describe on Mobile ecosystem. **(CLO1)**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Books/Slides	• Distribute syllabus to the students • Brief on Coursework and Exams requirements • Discuss on Lesson plan
2 3/4/2022 – 9/4/2022	2. Mobile Application Development Life Cycle. 2.1 Application development framework 2.2 Mobile application testing framework 2.3 Preparing development environment 2.4 Testing development environment.	° Introduction on how mobile application development life-cycle. ° Core development environment setup for	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	• Individual project discussion

	2.5 Mobile application testing framework. Mobile application life cycle.	mobile application development. ° Preparing for mobile development environment. **(CLO1)**				
3 10/4/2022 – 16/4/2022	3. User interface component 3.1 Standard interface component (label, input, button). 3.2 Sample application using standard components.	° Learn core mobile application development. ° Interface component and interaction. **(CLO1,CLO2)**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	• Project title and RFP • **Assignment 1 (10%)**
4 17/4/2022 – 23/4/2022	3.3 Interface layout design consideration. 3.4 More interface component (spinner, radio, toggle and list) 3.5 Menu and popup menu. Navigating multiple layouts.	° Mobile application layout management and interaction. ° Menu design and interaction. **(CLO1,CLO2)**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	• Discussion on the proposed project • **Quiz 1 (5%)** **Deepavali 4 Nov 2021**
5 24/5/2022 – 30/5/2022	4. Device features and Multimedia control. 4.1 Accessing contact, dialer and messaging functions. 4.2 Display and manipulate image. 4.3 Display and manipulate video.	° Learn to access phone core operation such as dialer, sms, and contact. ° Develop application using	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	• **Assignment 2 given (15%)**

	4.4 Play and manipulate audio.	multimedia element such as audio and video. Implement streaming services into application. **CLO1,CLO2**				
MID SEMESTER BREAK (1 May 2022 – 7 May 2022)						
6 8/5/2022 – 14/5/2022	5. File and Database Operation 5.1 File read and writes operation to storage. 5.2 Offline database access (add/delete/update/search)	Design and develop database access using local database. **CLO1,CLO2**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	• Discuss progress on Project
7 15/5/2022 – 21/5/2022	5.3 Online database access (add/delete/update/search) 5.4 JSON parser handler.	Design and develop online database application. **CLO1,CLO2**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	
8 22/5/2022 – 28/5/2022	6. Location Based Service 6.1 Accessing location-based service. 6.2 Accessing and manipulating Google maps. 6.3 Location based geocoder. Sample application using location-based service.	° Develop application with location aware features. ° Implement GPS services into application. ° Implement graphical map into mobile application. Map interaction and	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	

		manipulation. **CLO1,CLO2**				
9 29/5/2022 – 4/6/2021	7. Device sensor 7.1 Accessing and manipulating sensor manager. 7.2 Light, rotation, accelerometer, magnetometer, and gyroscope. Sample application using sensors.	° Access sensor services through mobile application. ° Use sensor management in application for smart application development. **CLO1,CLO2**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	• Discuss progress on project • **Midterm Online Exam (20%)**
10 5/6/2022 – 11/6/2022	8. Real Time database 8.1 Connect to Real Time database	° Learn how to build real-time application using RT services ° Use real time database in application **CLO1,CLO2**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	• **Quiz 2 (5%) (online)**
11 12/6/2022 – 18/6/2022	8.2 CRUD operation to RT database Display data from RT database	Manage CRUD data operation using RT database **CLO1,CLO2**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	• **Assignment 3 (15%)**
12 19/6/2022 – 25/6/2022	9. Mobile and Internet of Things 9.1 Introduction to IOT. 9.2 Basic IOT implementation SOC device side.	° Basic IOT component ° Sensor component **CLO1,CLO2**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	

13 26/6/2022 – 2/7/2022	9.3 Basic IOT implementation mobile side. 9.4 Sending and receiving data in IOT environment.	10. IOT data communication and control. **CLO1,CLO2**	4 TM2 OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	
14 3/7/2022 – 9/7/2022	10. Publishing Mobile Application 10.1 Preparing for mobile application release. 10.2 Version control 10.3 Signing and releasing application 10.4 Monetized application through mobile market.	° Testing mobile application using standard mobile testing framework. ° Preparing application for final release. ° Managing application versioning. ° Publishing to mobile app marketplace. **(CLO3)**	4 TM2OL	Lecture, discussion and SCL Online Learning via Webex	• Book/Slides • Lab instruction • Live coding	**Project Exam (30%)**
FINAL EXAMINATION						

Teaching Method 1 (TM1) – In Campus
Teaching Method 2 (TM2) – Strong Access Internet
Teaching Method 3 (TM3) – Moderate/Low Access Internet
Teaching Method 4 (TM4) – No Internet

Prepared By Course Coordinator **Checked By Head of Department** **Approved By Dean**

(Ahmad Hanis Mohd Shabli)	(……)	(……)
Date: 3/4/2022	Date:	Date:
Signature and Official Stamp	Signature and Official Stamp	Signature and Official Stamp

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