





Course Specifications

Course Title:	Mobile Programming and Applications
Course Code:	ICS 412
Program:	Information Technology
Department:	Computer Science and Information
College:	Science Az Al-Zulfi
Institution:	Majmaah University



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A. Course Identification

1. Credit hours:3
2. Course type
a. University College Department $$ Others
b. Required $$ Elective
3. Level/year at which this course is offered 7 th Level
4. Pre-requisites for this course (if any): Human Computer Interaction ICS 221
5. Co-requisites for this course (if any):Nil

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	48	80%
2	Blended	6	10%
3	E-learning	6	10%
4	Correspondence	-	-
5	Other	-	-

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours			
Contac	Contact Hours				
1	Lecture	30			
2	Laboratory/Studio	30			
3	Tutorial				
4	Others (specify)				
	Total	60			
Other 2	Other Learning Hours*				
1	Study	30			
2	Assignments	30			
3	Library				
4	Projects/Research Essays/Theses	10			
5	Others (specify)	30			
	Total	100			

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course examines the principles of mobile application design and development. Students will learn application development on the Android platform. Topics will include memory management; user interface design; user interface building; input methods; data handling;

network techniques and URL loading; and, finally, specifics such as GPS and motion sensing. Students are expected to produce a professional - quality mobile application.

2. Course Main Objective

Introduction - Get started

User Experience

Working in the Background

All about data

Performance and Security

Power Management, Augmented Reality, Mobile Device Security

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge:	
1.1	Identify options to save persistent application data	a1
1.2	Learn to setup Android application development environment	
2	Skills :	
2.1	Illustrate user interfaces for interacting with apps and triggering actions	b3
2.2	Interpret tasks used in handling multiple activities	b2
3	Competence:	
3.1	Appraise the role of security and performance in Android applications	c1

C. Course Content

No	No List of Topics	
1	Get started, Build your first app, Activities, Testing, debugging and using support libraries	12
2	User Interaction, Delightful user experience, Testing your UI	12
3	Background Tasks, Triggering, scheduling and optimizing background tasks	8
4	All about data, Preferences and Settings, Storing data using SQLite, Sharing data with content providers, Loading data using Loaders	12
5	Permissions, Performance and Security, Firebase and AdMob, Publish	8
6	Power Management, Augmented Reality, Mobile Device Security	8
Total		

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Identify options to save persistent application data	Lectures Lab demonstrations	Written Exam Homework
1.2	Learn to setup Android application development environment	Case studies Individual presentations	assignments Lab assignments Class Activities Quizzes
2.0	Skills		
2.1	Illustrate user interfaces for interacting with apps and triggering actions	Lectures Lab demonstrations	Written Exam Homework
2.4	Interpret tasks used in handling multiple activities	Case studies Individual presentations Brainstorming	assignments Lab assignments Class Activities Quizzes Observations
3.0	Competence		
3.1	Appraise the role of security and performance in Android applications	Small group discussion Whole group discussion Brainstorming Presentation	Written Exam Homework assignments Lab assignments Class Activities Ouizzes

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	First written mid-term exam	6	15%
2	Second written mid-term exam	12	15%
3	Presentation, class activities, and group	Every	10%
3	discussion	week	1070
	Homework assignments	After	
4		each	10%
		chapter	
	Implementation of presented protocols	Every	
5		two	10%
		weeks	
6	Final written exam	16	40%
7	Total		100%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)



E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice : Office hours: Sun: 10-12, Mon. 10-12, Wed. 10-12 Email: m.wagieh@mu.edu.sa

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Google Developer Training Team, Google Developer Training, "Android Developer Fundamental, Prentice Hall, 2016.
Essential References Materials	-
Electronic Materials	https://www.gitbook.com/book/google-developer-training/android- developer-fundamentals-course-practicals/details
Other Learning Materials	-

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classroom and Labs as that available at college of science at AzZulfi are enough.
Technology Resources (AV, data show, Smart Board, software, etc.)	Smart Board
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	N/A

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Questionnaires (course evaluation) achieved by		
the students and it is electronically organized by	Students	Indirect
the university.		
Student-faculty management meetings.	Program Leaders	Direct
Discussion within the staff members teaching	Deen Deviewen	Direct
the course	reer kevlewer	Direct
Departmental internal review of the course.	Peer Reviewer	Direct

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Reviewing the final exam questions and a sample of the answers of the students by others.	Peer Reviewer	Direct
Visiting the other institutions that introduce the same course one time per semester.	Faculty	Indirect

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify) Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Dr. Mohamed Wagieh
Reference No.	
Date	08/09/2019

