

COURSE DESCRIPTIONS

Faculty	Science and Information Technology				
Department	Software Engineering	NQF level	6		
Course Title	Mobile Application	Code	503410	Prerequisite	501317
Credit Hours	3	Theory	3	Practical	0
Course Leader	Mr. Mohammad Al-issa	email	Mohammadal-issa@jadara.edu.jo		
Lecturers	Mr. Mohammad Al-issa	emails	Mohammadal-issa@jadara.edu.jo		
Lecture time	08:30- 10:00 Sun, Tue	Classroom	D104		
Semester	First	Production		Updated	2021-2022
Awards	Bachelor Degree			Attendance	Fulltime

Short Description

In this course, the students will be learning the essentials for Android application development, and provides students with the required skills for the design and implementation of different mobile applications. Topics include: building user interfaces, using internet resources, managing files and preferences, using maps and location- based services, working with audio, video and using the camera. This course is a lab-based course which includes in-class practical assignments and tasks.

Course Objectives

- Describe the platforms upon which the Android operating system will run.
- Create a simple application that runs under the Android operating system.
- Access and work with the Android file system.
- Create an application that uses multimedia under the Android operating system.
- Access and work with databases under the Android operating system.

Learning Outcomes

A. Knowledge - Theoretical Understanding

a1. Describe the main concepts of mobile application development. (K1)

B. Knowledge - Practical Application

a2. Understand the basic components of Android as an open source software. (K4)

a3. Understand concepts of Intents, Broadcast receivers and working in the background. (K4)

C. Skills - Generic Problem Solving and Analytical Skills

b1. Compare between Android Views, Activities, and Fragments. (S1)

D. Skills - Communication, ICT, and Numeracy

E. Competence: Autonomy, Responsibility, and Context

Teaching and Learning Methods	
<ul style="list-style-type: none"> • Lecture, • Lab (online), • Discussion 	
Assessment Methods	
<ul style="list-style-type: none"> • Formative Assignment • Assignment and Labs • Midterm exam, • Final exam 	

Course Contents					
Week	Hours	CILOs	Topics	Teaching & Learning Methods	Assessment Methods
1,2	6	a1	About Android studio, Installing the SDK, Installing Android Development Tools, Creating Android Emulator.	Lecture	Formative Assignment
3,4	6	a1, a2, a3	Android applications structure, creating a project, working with the Android, Manifest.xml, Using the log system, Activities, Application context.	Lecture	Assignment and Labs
5	3	a2, b1	Layouts for Multiple Device Orientations	Lecture	Assignment and Labs
6	3	a3, b1	Activity life cycle, Service lifecycle, Supporting multiple screen sizes,	Lecture, discussion	Assignment and Labs,
7	3	a1, b1	Text controls, Button controls, Toggle buttons, Images.	Lecture, discussion	Midterm exam
8,9	6	a1, a3	Using string, Integer arrays Service lifecycle	Lecture, discussion	Assignment and Labs
10,11	6	b1	List View, List Activity, Menus, Array Adapter, Implicit	Lecture, discussion	Assignment and Labs
12,13	6	a3, b1	Intents, Parameters on Intents, Pending intents	Lecture, discussion	Assignment and Labs,
14	6	b1	Handler, Toasts, Explicit, toast notifications, alert dialog	Lecture, discussion	Assignment and Labs,
15	2	a1, a2, a3, b1	End of Term Exam		Final exam

Infrastructure	
Textbook	Android for Programmers: An App-Driven Approach, 2nd Edition (2014), By Paul Deitel, Harvey Deitel and Abbey Deitel. Prentice Hall.
References	Learn Android Studio, 2015, by Adam Gerber and Clifton Craig. Apress.
Required reading	Android Studio Development Essentials, 2014, by Neil Smyth. Techotopia.
Electronic materials	<ul style="list-style-type: none"> • https://www.geeksforgeeks.org/android-tutorial/#Android%20Studio • Labs and Power Point slides on (elearning.jadara.edu.jo).
Other	

Course Assessment Plan							
Assessment Method		Grade	CILOs				
			a1	a2	a3	b1	b2
First (Midterm)		30	10	10	5	5	
Second (if applicable)		0					
Final Exam		50	8	12	16	14	
Coursework		20					
Coursework assessment methods	Assignments		1	1	2	2	
	Case study						
	Discussion and interaction		1	1	2	2	
	Group work activities						
	Lab tests and assignments		2	2	2	2	
	Presentations						
	Quizzes						
Total		100	22	26	27	25	

Plagiarism
<p>Plagiarism is claiming that someone else's work is your own. The department has a strict policy regarding plagiarism and, if plagiarism is indeed discovered, this policy will be applied. Note that punishments apply also to anyone assisting another to commit plagiarism (for example by knowingly allowing someone to copy your code).</p> <p>Plagiarism is different from group work in which a number of individuals share ideas on how to carry out the coursework. You are strongly encouraged to work in small groups, and you will certainly not be penalized for doing so. This means that you may work together on the program. What is important is that you have a full understanding of all aspects of the completed program. In order to allow proper assessment that this is indeed the case, you must adhere strictly to the course work requirements as outlined above and detailed in the coursework problem description. These requirements are in place to encourage individual understanding, facilitate individual assessment, and deter plagiarism.</p>