Science & IT
Faculty of Science & IT

جامعـــة الـزيـتـونــــة الأردنـيــة
Al-Zaytoonah University of Jordan
كلية العلوم وتكنولوجيا المعلومات
Faculty of Science and IT

عراقة وجودة
"Tradition and Quality"

QF01/0408-4.0E	**Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Department**

Study plan No.	**2021/2022**		**University Specialization**		**Software Engineering**		
Course No.	0114494		**Course name**		Special topics in SE		
Credit Hours	3		**Prerequisite Co-requisite**		Visual Programming Applications		
Course type	□ MANDATORY UNIVERSITY REQUIREMENT	□ UNIVERSITY ELECTIVE REQUIREMENTS	□ FACULTY MANDATORY REQUIREMENT	□ Support course family requirements	□ Mandatory requirements	√ Elective requirements	
Teaching style	□ **Full online learning**		□ **Blended learning**		√ **Traditional learning**		
Teaching model	□ **2 Synchronous: 1 synchronous**		□ **2 face to face : 1synchronous**		√ **3 Traditional**		

Faculty member and study divisions information (to be filled in each semester by the subject instructor)

Name	**Academic rank**	**Office No.**	**Phone No.**	**E-mail**
Mohammad Muhairat	**Associate Professor**	**340**	**--------------------**	**drmohairat@zuj.edu.jo**

Division number	**Time**	**Place**	**Number of students**	**Teaching style**	**Approved model**
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Brief description

This course introduces students to programming technologies, design and development related to mobile applications. Topics include, Introducing Flutter, Learning Dart Basics, Using Common Widgets, Writing Platform-Native Code, Saving Data With Local Persistence and, Adding the Firebase And The Firestore Client App. Upon completion, students should be able to create basic applications for mobile devices.

Learning resources

Course book information (Title, author, date of issue, publisher ... etc)	Beginning Flutter : A Hands On Guide To App Development, Marco L. Napoli, 2020, John Wily & Sons			
Supportive learning resources (Books, databases, periodicals, software, applications, others)	1. Beginning App Development with Flutter: Create Cross-Platform Mobile Apps, Rap Payne, 2019, Kindle. 2. Flutter.dev (The main Web Site for all Flutter resources).			
Supporting websites	1. https://youtube.com/			
The physical environment for teaching	√ Class room	□ labs	□ Virtual educational platform	□ Others
Necessary equipment and software	Android Studio or VS Code software			
Supporting people with special needs	**--------**			
For technical support	**--------**			

Course learning outcomes (S= *Skills, C= Competences K= Knowledge,)*

No.	Course learning outcomes	The associated program learning output code
	Knowledge	
K1	The knowledge of software development fundamentals, including data structures, algorithms, complexity, multiple programming languages, paradigms, and technologies.	MK4
	Skills	
S1	An ability to use the techniques, skills, and modern tools necessary for software engineering practice.	MS3
	Competences	
C1	Ability to develop software systems in one or more significant application domains.	MC2

Mechanisms for direct evaluation of learning outcomes

Type of assessment / learning style	Fully electronic learning	Blended learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
Midterm exam	30%	30%	**40%**	30%
Participation / practical applications	0	0	**10%**	30%
Asynchronous interactive activities	30%	30%	**0**	0
Final exam	40%	40%	**50%**	40%

Note: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.

Schedule of simultaneous / face-to-face encounters and their topics

Week	Subject	learning style*	Reference **
1	Introducing Flutter and Getting Started	Lecture/ learning through projects	3-25
2	Creating a Hello World App	Lecture/ learning through projects	25-43
3	Learning Dart Basics	Lecture/ learning through projects	43-65
4	Creating a Starter Project Template	Lecture/ learning through	65-77

		projects	
5	Understanding the Widget Tree	Lecture/ learning through projects	77-103
6	Using Common Widgets	Lecture/ learning through projects	103-151
7	Adding Animation to An App	Lecture/ learning through projects	151-177
8	Creating An App’s Navigation	Lecture/ learning through projects	177-221
9	Creating Scrolling Lists and Effects	Lecture/ learning through projects	221-253
10	Building Layouts	Lecture/ learning through projects	253-267
11	Applying Interactivity	Lecture/ learning through projects	267-307
12	Writing Platform-Native Code	Lecture/ learning through projects	307-327
13	Saving Data With Local Persistence	Lecture/ learning through projects	327-375
14	Adding the Firebase And The Firestore Client App	Lecture/ learning through projects	375-411
15	Adding State Management to The Firestore Client App	Lecture/ learning through projects	411-453
16	Final Exam		

*** Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.**

**** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.**

Schedule of asynchronous interactive activities (in the case of e-learning and blended learning)

Week	Task / activity	Reference	Expected results
1			
2			
3			
4			
5			
6			
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14			
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16			