



Module (Course Syllabus) Catalogue 2022-2023

College/ Institute	College of Erbil Technical Engineering	
Department	Department of Information System Engineering	
Module Name	Mobile Application Development	
Module Code	MOA603	
Degree	Technical Diploma <input type="checkbox"/> Bachler <input checked="" type="checkbox"/> High Diploma <input type="checkbox"/> Master <input type="checkbox"/> PhD <input type="checkbox"/>	
Semester	Six	
Qualification	Java Fundamentals	
Scientific Title		
ECTS (Credits)	5	
Module type	Prerequisite <input type="checkbox"/> Core <input checked="" type="checkbox"/> Assist. <input type="checkbox"/>	
Weekly hours	4	Total Workload=(175) hrs
Weekly hours (Theory)	(1)hr Class	(53)Total hrs Workload
Weekly hours (Practical)	(3)hr Class	(82)Total hrs Workload
Number of Weeks	16	
Lecturer (Theory)	Mohammed Qasim Kamal	
E-Mail & Mobile NO.	mohammed.qasim@epu.edu.iq 07504883909	
Lecturer (Practical)	Khadija Mohammad and Ahmed Kaka	
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Course Book

Course Description	The course is generally aimed at making the student familiar with the general concepts common to Beginning Android and Java to develop Android apps, what exactly Android and Java are, how they work and complement each other, understanding the composition of our projects, it will also be beneficial to make sure we get the most from the emulator, write some Java code to switch between our different layouts within a single app/project				
Course objectives	This course introduces fundamental concepts in android application development and reviews important concepts of Layouts, Cards, Buttons, TextFields and many other components; it also attempts to develop good programming skills and habits, the course has a heavy programming component, to be completed using Java and kotlin Programming Language.				
Student's obligation	Student's obligation in the Computer application course is: <ul style="list-style-type: none"> • Attendance in the all lectures. • One or more quizzes in each course. • Exam in end of first course and second course. 				
Required Learning Materials	<ul style="list-style-type: none"> • Using data show, white board and PowerPoint, Testing in department's Laboratory. • Publish all lectures and notes in google classroom and moodle account. 				
Evaluation	Task		Weight (Marks)	Due Week	Relevant Learning Outcome
	Paper Review				
	Assi	Homework	5	2	solve problems of

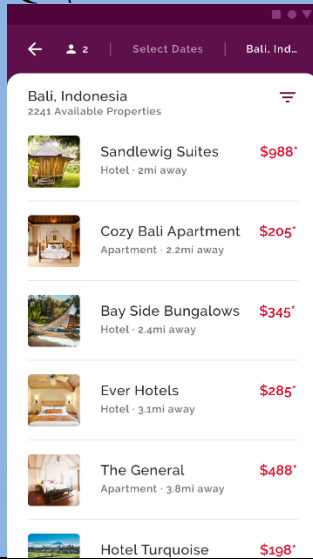
				android
	Class Activity	2	2	Be active during class
	Report	10	2	How to write about and android programming
	Seminar			
	Essay			
	Project	10	1	
	Lab Report & Activity	10	4	using tools and code in android studio using java, kotlin
	Quiz	4	1	
	Lab Quiz	4	1	
	Midterm Exam	10	1	
	Lab Midterm Exam	15	1	
	Final Exam	20	1	
	Lab Final Exam	20	1	
Total	100			
Specific learning outcome:	<p>On successful completion of this module, students should be able to gain knowledge of android application development concepts and the following:</p> <ul style="list-style-type: none"> • Understand android application development concepts and techniques. • Understand the fundamentals of programming in java and kotlin. • Be able to design and implement material component with patterns to solve moderately complex problems. • Be able to write good program documentation. 			
Course References:	<ul style="list-style-type: none"> • Android Programming for Beginners Second Edition by John Horton 			

	<ul style="list-style-type: none"> Android Programming with Kotlin for Beginners by John Horton 	
Course topics (Theory)	Week	Learning Outcome
Beginning Android and Java First Contact – Java, XML, and the UI Designer Exploring Android Studio and the Project Structure	1&2&3	Intro in to android with java and how to use IDE
Getting Started with Layouts and Material Design Beautiful Layouts with CardView and ScrollView	4&5	How to use Material Design and CardView
The Android Lifecycle Java Variables, Operators, and Expressions Java Decisions and Loops Java Methods Object-Oriented programming The Stack, the Heap, and the Garbage Collector Anonymous Classes – Bringing Android Widgets to Life	6&7&8	How the android system work
Android Dialog Windows Arrays, ArrayList, Map and Random Numbers Adapters and Recyclers	9&10&11	How to use Dialog, Arrays and Recyclers
Data Persistence and Sharing Localization Animations and Interpolations Drawing Graphics	12&13&14	How to data and store it, animation and drawing
Threads, and Starting the Live Drawing App Particle Systems and Handling Screen Touches Supporting Different Versions of Android, Sound Effects, and the Spinner Widget Design Patterns, Multiple Layouts, and Fragments Advanced UI with Paging and Swiping Advanced UI with Navigation Drawer and Fragment Android Databases Coding a Snake Game Using Everything We Have Learned So Far Enumerations and Finishing the Snake Game Kotlin	15&16	Screen handling, Design pattern, paging and database
Practical Topics	Week	Learning Outcome

Introduction to Introduction To Android Studio, Media Images, Video and Sound	1&2&3	Intro in to programming with android with java and kotlin how to use input output operators
Layout Advanced String Manipulation	4&5	How to use layout and string manipulation
List Views Animations Buttons And App Design	6&7&8	How to create list, card and button
Downloading Images Processing JSON Data SQLite Databases	9&10&11	How to use different type of methods of class to download image, process data
Maps & Geolocation Getting The User's Location Permanent Data Storage	12&13&14	How to use map and store data
Submitting Your App To Google Play	15&16	Deploy your project

Questions Example Design

Q1\ Convert this design to code?



Extra notes:

External Evaluator

I confirm that the syllabus given the attached course book is sufficient and covers the required areas needed for the students.



Signature

Assist Lecturer Dana Farhad Doghramachi