



# Course Specification

## (Bachelor)

Course Title: Smart Devices Programming

Course Code: APCS3209

Program: Programing and Computer Science Program

Department: Enter Department Name .

College: Applied College

Institution: Umm Al-Qura University

Version: 1

Last Revision Date: Jan -2025

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## A. General information about the course:

### 1. Course Identification

1. Credit hours: ( 3 )

#### 2. Course type

A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others  
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (3<sup>rd</sup> level / 2<sup>nd</sup> year)

#### 4. Course General Description:

To introduce the student to mobile applications design and implementation. Topics include development environment, phone emulator, key programming paradigms, UI design including views and activities

#### 5. Pre-requirements for this course (if any):

APCS2205 Computer Programming (2)

#### 6. Co-requisites for this course (if any):

#### 7. Course Main Objective(s):

To provide students with the necessary skills to design and develop a mobile application

### 2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	4*15	100%
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> <li>Traditional classroom</li> <li>E-learning</li> </ul>		
4	Distance learning		



### 3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	2*15
2.	Laboratory/Studio	2*15
3.	Field	
4.	Tutorial	
5.	Others (specify)	
Total		60

### B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	To explain the fundamental concepts for building mobile applications	K3	Lectures	Quiz Written Exams
2.0	Skills			
2.1	To design a mobile application Interface	S3	Lectures Tutorial Solved examples Group discussion	Assignments Project
2.2	To implement a mobile application	S2	Lectures Tutorial Solved examples Group discussion	Assignments Project
2.3	To connect a database to an application	S6	Lectures Tutorial Solved examples Group discussion	Assignments Projects
3.0	Values, autonomy, and responsibility			
3.1	To work effectively and collaboratively in a teamwork setting.	V3		Projects

### C. Course Content

No	List of Topics	Contact Hours
1.	Course enrollment including course contents, topics, textbook, references, methods of evaluation and due dates. Introducing the Application and websites used in the practical lab sessions.	2
2.	Introduction to Mobile Applications Programming and Basics of Android Framework	2
3.	Building First Android Application an IDE	2
4	Getting to know the Android User Interface	2
5	Designing User Interface using Views	4
6	Activites and Intents- Activity life cycle	2
7	Custom Adapter - Displaying Menus and Pictures with Views	4
8	Data Persistence- Shared Preferences and Data Storage	2
9	SQL database programming	2
10	Services	2
11	Built in Sensors	2
12	Publishing Android Applications	2
Total		

### D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz	4	10%
2.	Midterm Exam	7	20%
3.	Lab work	Through the semester	10%
4.	Final Project	15	20%
5.	Final Exam	16	40%
...			

\*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

### E. Learning Resources and Facilities

#### 1. References and Learning Resources





Essential References	<p>1. Android Programming for Beginners: Build in-depth, full-featured Android apps starting from zero programming experience 3rd ed. Edition.</p> <p>2. Head First Android Development, 2nd Edition by <a href="#">Dawn Griffiths</a>, <a href="#">David Griffiths</a></p> <p>Released August 2017</p> <p>Publisher(s): O'Reilly Media, Inc.</p> <p>ISBN: 9781491974056</p>
Supportive References	
Electronic Materials	<a href="https://developer.android.com/">https://developer.android.com/</a>
Other Learning Materials	Course presentation slides submitted by the course coordinator.

## 2. Required Facilities and equipment

Items	Resources
<b>facilities</b> (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	<b>Lecture room (max 40 students)</b> <b>Computer lab (max 20 students)</b>
<b>Technology equipment</b> (projector, smart board, software)	projector and internet connection
<b>Other equipment</b> (depending on the nature of the specialty)	

## F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	E-Survey of sufficiency of learning resources (Indirect)
Effectiveness of Students assessment	Peer reviewers	Random grading report Test Completion report for test Standards (Direct)
Quality of learning resources	Students	E-Survey of sufficiency of learning resources (Indirect)
The extent to which CLOs have been achieved	Instructor, Program leaders and Course coordinator	Check the results of quizzes, mid-term and final exams. (Direct)
Other		

**Assessors** (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify))

**Assessment Methods** (Direct, Indirect)





## G. Specification Approval

COUNCIL /COMMITTEE	Umm Al-Qura University Council
REFERENCE NO.	851141114462/190365
DATE	1446/11/22

