



Course Specifications

Course Title:	Mobile Application Development
Course Code:	CP53
Program:	Diploma in Programming and Computer Sciences
Department:	Technology department
College:	Applied College
Institution:	Taif University

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A. Course Identification

1. Credit hours:	4
2. Course type	
a.	University <input type="checkbox"/> College <input type="checkbox"/> Department <input type="checkbox"/> Others <input checked="" type="checkbox"/>
b.	Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered:	Second Year / Sixth Level
4. Pre-requisites for this course (if any):	Null
5. Co-requisites for this course (if any):	Null

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	30	50%
2	Blended		
3	E-learning		
4	Distance learning		
5	Other (Lab)	30	50%

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	30
2	Laboratory/Studio	30
3	Tutorial	
4	Others (specify)	
	Total	60

B. Course Objectives and Learning Outcomes

1. Course Description

This course introduces the students to Android application development using standard development tools in Java programming language. The course will cover steps of Android application development from ideation to design, implementation, testing and deployment.

2. Course Main Objective

The students should learn to create Mobile applications from scratch, install and run on their mobile phones as well as share with others. The students should be able to choose appropriate GUI design, implement it in Android/iOS and write the relevant logic to complete the business functionality of the program. The students should also learn about application installation and internationalization (multiple-language support.)

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge and Understanding	
1.1	Specify Android/iOS development tools for mobile applications.	K2
1.2	Specify an appropriate design for an interface and be able to design its prototype in a development tool.	K2
2	Skills :	
2.1	Null	
3	Values:	
3.1	Implement the business logic using code corresponding to a design for achieving a desired functionality.	V1

C. Course Content

No	List of Topics	Contact Hours
1	Introduction to mobile apps and types of mobile apps and designs for Android platform	6
2	Introduction to Android/iOS Development tools: downloading, installation, configuration of appropriate SDK API's, etc.	6
3	Creating projects, running provided sample applications on emulator: Understanding the difference of interface components	6
4	Understanding application life-cycle and project components (resources, assets, directories, files, ...)	12
5	Developing custom applications: Designing UI, file/database storage and installation/debugging on devices using DDMS	12
6	Connectivity (Bluetooth, Wi-Fi) and Networking	6
7	Services, Intents and Sensors	6
8	Publishing the APP	6
Total		60

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 and Understanding		
1.1	Specify Android/iOS development tools for mobile applications.	Lectures Labs	Direct Quizzes / Homework Exams Indirect Course Exit Survey
1.2	Specify an appropriate design for an interface and be able to design its prototype in a development tool.	Lectures Labs	Direct Quizzes / Homework Exams Indirect Course Exit Survey
2.0	Skills		
	Null		

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
3.0	Values		
3.1	Implement the business logic using code corresponding to a design for achieving a desired functionality.	Lectures Laboratory	Direct Assessment Tool Lab Exams Indirect Assessment Tool Course Exit Survey

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Mid-Term	6	20%
2	Quizzes	8	5%
3	Home Works/ Attendance / Evaluation	11	10 %
4	Final Labs Exam	11	15%
5	Final Examination	12	50%

*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 :

- ✓ Providing a guide for each group of students, and distributing student lists electronically to faculty members.
- ✓ There is an academic advising guide that defines the role of the faculty member in the academic advising process.
- ✓ The program supervisor is available throughout the year to answer student inquiries.
- ✓ Availability of full information about the program and its members and ways to communicate with them.
- ✓ Use the Learning Management System (Black Board) to communicate with students
- ❖ Student Handbook, Deanship of Student Affairs.
https://www.tu.edu.sa/Attachments/893d1c33-3156-44d7-b4b8-e203d4cca737_.pdf
- ❖ Student Handbook at Taif University.
https://www.tu.edu.sa/Attachments/41dc8a24-22b7-4ae1-9b31-3608de8bcf8b_.pdf

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	❖ Dawn Griffiths and David Griffiths, Head First Android Development: A Brain-Friendly Guide, 2nd Ed. , 2015, ISBN-13: 978-1491974056, Publisher: O'reilly.
Essential References Materials	<ul style="list-style-type: none"> ❖ John Horton, Android Programming for Beginners: Learn all the Java and Android skills you need to start making powerful mobile applications, December 31, 2015, Packt Publishing ❖ Ed Burnette, Hello, Android: Introducing Google's Mobile Development Platform 4th Edition, ISBN-13: 978-1680500370, The Pragmatic Programmers.

Electronic Materials	<ul style="list-style-type: none"> ❖ Saudi Digital Library:https://sdl.edu.sa/SDLPortal/Publishers.aspx ❖ The digital repository of Taif University:http://applications/eLibrary
Other Learning Materials	<ul style="list-style-type: none"> ❖ Course presentation slides submitted by the course coordinator (if any).

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	<ul style="list-style-type: none"> ❖ Classroom with 50 chairs ❖ Lab with 25 chairs
Technology Resources (AV, data show, Smart Board, software, etc.)	<ul style="list-style-type: none"> ❖ Availability of a Data Show ❖ Provides a smart board. ❖ Provide a whiteboard and colored whiteboard pens.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	<ul style="list-style-type: none"> ❖ Null

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching	<ul style="list-style-type: none"> • Students • Faculty members • Coordinator • Council • Curriculum Committees 	<ul style="list-style-type: none"> • Course exit survey • Feedback from Faculty members • Feedback from Course Coordinator • Feedback from council • Feedback from Curriculum Committees
Effectiveness of assessment	<ul style="list-style-type: none"> • Students • Faculty members • Coordinator • Council • Curriculum Committees 	<ul style="list-style-type: none"> • Course exit survey • Feedback from Faculty members • Feedback from Course Coordinator • Feedback from council • Feedback from Curriculum Committees
Extent of course achievement	<ul style="list-style-type: none"> • Students • Faculty members • Coordinator • Council • Curriculum Committees 	<ul style="list-style-type: none"> • Course exit survey • Feedback from Faculty members • Feedback from Course Coordinator • Feedback from council • Feedback from Curriculum Committees
Extent of course learning outcomes	<ul style="list-style-type: none"> • Students • Faculty members • Coordinator • Council 	<ul style="list-style-type: none"> • Course exit survey • Feedback from Faculty members • Feedback from Course Coordinator

Evaluation Areas/Issues	Evaluators	Evaluation Methods
	<ul style="list-style-type: none"> • Curriculum Committees 	<ul style="list-style-type: none"> • Feedback from council • Feedback from Curriculum Committees
Quality of learning resources	<ul style="list-style-type: none"> • Students • Faculty members • Coordinator • Council • Curriculum Committees 	<ul style="list-style-type: none"> • Course exit survey • Feedback from Faculty members • Feedback from Course Coordinator • Feedback from council • Feedback from Curriculum Committees

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	
Reference No.	
Date	