هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	Mobile Engineering & Development
Course Code:	SE1502
Program:	Software Engineering
Department:	Software Engineering
College:	Computing and Information
Institution:	Al-Baha University
Version:	V1.0
Last Revision Date:	24-4-2024

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (4)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (7th /3rd year)					
4. Course general Description:					
This course teaches essential principles, techniques, tools, and methods for designing and implementing robust mobile applications and user experiences. It provides students a foundation for further study and professional practice in mobile software development. The course covers the basics of Android programming, cell phone localization, energy efficiency, prototyping, security, user centered design, context aware applications, and usability testing.					
5. Pre-requirements for this course (if any): CS1251 Programming 2					
6. Pre-requirements for this course (if any)**: None**					
7. Course Main Objective(s):					
To introduce students to the development of mobile computing software and applicationsusing Android as a reference platform and introduce mobile computing concepts from a programmer's perspective.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	4	100%
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	33
2.	**Laboratory/Studio**	22
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		55

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

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Recognize programming constraints with mobileplatforms.	**K1**	Lectures, Discussions	Quizzes, Assignments, Midterm Exam
1.2	Identify various concepts of mobile programming that make it unique from programming for other platforms.	**K2**	Lectures, Discussions	Quizzes, Assignments, Midterm Exam
1.3	Differentiate between the Android programming models and development tools.	**K3**	Lectures, Discussions	Quizzes, Assignments, Midterm Exam
2.0				
2.1	Apply user and system oriented android programming	**S1**	Lectures, Discussions, Project, Programming Assignments	Project, Assignmentsand Exams
2.2	Analyze different	**S2**	Lectures,	

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	program hierarchies affectingenergy-efficiency, user experience and security.		Discussions, Project, Programming Assignments	Project, Assignments and Exams
2-3	Design sophisticated mobile interfaces using rapid prototyping techniques.	**S3**	Lectures, Discussions, Project, Programming Assignments	Project, Assignments and Exams
3.0	**Values, autonomy, and responsibility**			
3.1		**V1**		

C. Course Content

No	List of Topics	Contact jHours
1.	Mobile Applications and Android Overview	3
2.	Android Programming Environment	6
3	Qualitative Data Analysis / Android Fundamentals	6
4	Mobile Design / Paper Prototyping	6
5	Mobile Location / Networking	3
6	Security	3
7	Energy-Efficiency	3
8	Field Evaluation	3
Total		**33**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm Exam	5	20%
2.	Project	10	10%
3.	Lab exam	11	20%
4	Final Exam	12	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	Android Programming: The Big Nerd Ranch Guide (Big Nerd RanchGuides) 4th Edition, Bill Phillips, Chris Stewart, and Kristin Marsicano, 2019, ISBN-13: 978-0135245125.
Supportive References	Professional Android Application Development, 4th Edition, RetoMeier, 2018, ISBN-13: 978-1118949528. Mednieks, Dornin, Meike & Nakamura,"Programming Android: Java Programming for New Generation of Mobile Devices", O'Reilly, October 2012
Electronic Materials	https://developer.android.com/
Other Learning Materials	**N/A**

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom and Blackboard
Technology equipment (projector, smart board, software)	Data show and software
Other equipment (depending on the nature of the specialty)	N/A

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	• Students • Faculty • Peer Reviewers • Program Leader Course Coordinator	•Surveys (indirect). •Direct feedback from students. •Course evaluation by Peer Reviewers (indirect). •Class visit by Program Leader (indirect) Comprehensive Course report (where we can find information about teaching difficulties and action plan, …)
Effectiveness of Students assessment	• Students • Faculty • Peer Reviewers • Program Leader • Exam Evaluation Committee Course Coordinator	• Surveys (indirect). • Direct feedback from students. • Course evaluation by Peer Reviewers (indirect).

Assessment Areas/Issues	Assessor	Assessment Methods
		• Class visit by Program Leader (indirect) Exam evaluation by the Exam Evaluation Committee (indirect)
Quality of learning resources	• Students • Faculty • Peer Reviewers • Course Coordinator	• Surveys (indirect) • Course evaluation by Peer Reviewers (indirect). Comprehensive Course report (where we can find information about difficulties and challenges about learning resources as well as consequences and action plan, …)
The extent to which CLOs have been achieved	• Faculty • Program Leader Course Coordinator	• Student Results (direct) Comprehensive Course report (where we can find the CLO assessment results)
Other	None	None

Assessor♦ (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**Curriculum Committee**
REFERENCE NO.	
DATE	**28 April 2024**