هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	**Software Engineering 2**
Course Code:	**CS1503**
Program:	**Computer Science**
Department:	**Computer Science and Engineering**
College:	**Computer Science and information technology**
Institution:	**Albaha University**
Version:	*Course Specification Version Number*
Last Revision Date:	*Pick Revision Date.*

Table of Contents:

A. General information about the course:

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: 7 / 3nd year					
4. Course general Description Software engineering is a discipline that concerns the software development process, focusing on the common principles for creating and maintaining the quality of software products. The core of software engineering is the property of a lifecycle model which covers distinct phases of the software development process, including requirement analysis, software design, implementation, testing and validation, evolution and maintenance.					
5. Pre-requirements for this course (if any): **Software Engineering 1 (CS1009).**					
6. Co- requirements for this course (if any): none					
7. Course Main Objective(s) **The main purpose for this course is to teach students how to:** The main purpose for this course is to teach students how to: • Describe software engineering concepts, objectives and software types. • Describe different software engineering processes • Explain software requirements engineering and its methods • Recognize different methods for modeling, designing, testing software • Interact in groups collaboratively. • Communicate concepts and techniques in oral presentations.					

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	33	100%
2.	E-learning		
3.	Hybrid • Traditional classroom • E-learning		
4.	Distance learning		

2. Contact Hours (based on the academic semester)

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

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	Describe software engineering concepts, objectives and software types.	K1	- Lectures - Discussions	- Homework (rubric) - Midterm - Final exam
1.2	Describe different software engineering processes.	K2	- Lectures - Discussions	- Homework (rubric) - Midterm - Final exam
2.0	Skills			
2.1	Explain software requirements engineering and its methods	S1	- Lectures - Problem based learning - Demonstration	- Homework (rubric) - midterm - Final exam - Project evaluation form (rubric)
2.2	Recognize different methods for modeling, designing, testing software	S2	- Lectures - Problem based learning - Demonstration	- Homework (rubric) - midterm - Final exam - Project evaluation form (rubric)
3.0	Values, autonomy, and responsibility			
3.1	Work both independently and collaboratively	V1	- Projects	- Project evaluation form (rubric)
3.2	Interact in concepts and techniques in oral presentations	V2	- Projects	- Project evaluation form (rubric)

C. Course Content

No	List of Topics	Contact Hours
1.	Software Engineering Concepts, Software Process and Software Development Life Cycle.	4
2.	Agile Software Development	4
3.	Requirements Engineering	6
4.	Architectural Design	6
5.	Design and Implementation	5
6.	Software Testing	4
7.	Software Evolution	4
Total		33

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Homework	Every two Weeks	٥%
2.	Midterm	6	20%
3.	Project evaluation form (rubric)	12	١٥%
4.	Quiz	9	10%
6.	Final Exam	13	٥0%

*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	- Ian Sommerville, Software Engineering, 10th edition, - UML Distilled: A Brief Guide to the Standard Object Modeling Language (3rd Edition) 3rd Edition.
Supportive References	- Computer Science Curriculum 2013 – http://cs2013.org - ACM (Association for Computer Machinery) Curricula Recommendations - http://www.acm.org/education/curricula-recommendations
Electronic Materials	- ACM (Association for Computer Machinery) web site - http://www.acm.org/ - IEEE Computer Society web site -http://www.computer.org/portal/web/guest/home - Access to the Saudi Digital Library (SDL). - Using the learning management system of the university – Rafid System (https://lms.bu.edu.sa/).
Other Learning Materials	None

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	• A classroom or lecture hall with whiteboard for 25 students. • A digital circuit's laboratory.
Technology equipment (projector, smart board, software)	• A digital image projection system with connection to desktop computer and laptop computer.

Items	Resources
	• High speed Internet connection. • An instructor computer station.
Other equipment (depending on the nature of the specialty)	None

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 (interview between Program leader and students). • Course evaluation by Peer Reviewers (indirect). • Class visit by Program Leader • Comprehensive Course report (where we can find information about teaching difficulties and action plan, …)
Effectiveness of students assessment	• Students • Faculty • Peer Reviewers • Course Coordinator • Exam Evaluation Committee • Course Coordinator	• Surveys (indirect). • Direct feedback from students (interview between Program leader and students). • Assessment results (direct) • Course evaluation by Peer Reviewers (indirect). • Comprehensive Course report (where we can find information about assessment difficulties and action plan, …) • Exam evaluation by the Exam Evaluation Committee (indirect)
Quality of learning resources	• Students • Faculty	• Surveys (indirect)

Assessment Areas/Issues	Assessor	Assessment Methods
	• Peer Reviewers • Course Coordinator	• 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 Data

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	