هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title: Quality Standardization
Course Code: SE1763
Program: Software Engineering
Department: Software Engineering
College: Faculty of Computer Science and Information Technology
Institution: Al-Baha University
Version: V1.0
Last Revision Date: 24-April-2024

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (3)					
3 Credit Hours (3, 0, 0) (Lecture, Lab, Tutorial) (3 Contact Hours)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☐ Required		☒ Elective		
3. Level/year at which this course is offered: (8th Level/3rd Year)					
4. Course General Description:					
This course provides a broad introduction on Software Quality Assurance. This includes the concept of quality, Measurements, and Metrics in the software industry. Students will learn the difference between software quality control and quality assurance. In addition, a set of quality system models such as ANSI, IEEE, ISO, ITIL, CMMI, PRINCE2, ISO 9000 will be studied. Moreover, during the course, students will practice locating the software quality assurance and measurement in real examples during a software development lifecycle and project management.					
5. Pre-requirements for this course (if any): None					
6. Pre-requirements for this course (if any): None					
7. Course Main Objective(s):					
The main aim of this course is to teach the students the concepts of Quality, Quality control, and Quality Assurance in the software industry. This includes exploring various models such as ANSI, IEEE, ISO, ITIL, CMMI, PRINCE2, ISO 9000. It aims in addition to allow students to practice locating the software quality assurance and measurement in real examples during a software development lifecycle and project management.					

2. 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		
5	Other (Lab)		

3. 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	Recognize the concepts of Quality, Quality control, and Quality Assurance in the software industry and the difference between them	K1	- Lectures	***Direct Assessment Tool*** Midterm Exam Final exam ***Indirect Assessment Tool*** Course Exit Survey

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.2	Illustrate understanding of well-known quality system models.	K2	- Lectures - Lab Work	***Direct Assessment Tool*** Midterm exam Final exam ***Indirect Assessment Tool*** Course Exit Survey
1.3	Identify the Quality Metrics and Measurements to be used in certain situations	K3	- Lectures -Lab Work	***Direct Assessment Tool*** Midterm exam Final exam ***Indirect Assessment Tool*** Course Exit Survey
2.0	**Skills**			
2.1	Identify Metrics and Measurements to be under consideration	S1	- Lectures - Lab work - Project	***Direct Assessment Tool*** Project (rubric) Final exam ***Indirect Assessment Tool*** Course Exit Survey
2.2	Design and manage Quality Assurance plan	S2	- Lectures - Lab work - Project	***Direct Assessment Tool*** Project (rubric) Final exam ***Indirect Assessment Tool*** Course Exit Survey
2.3	Apply reporting and presentation on a software Quality Assurance	S3	- Lectures - Lab work - Project	***Direct Assessment Tool*** Project (rubric) Final exam ***Indirect Assessment Tool*** Course Exit Survey
3.0	**Values, autonomy, and responsibility**			
3.1	Demonstrate effective teamwork.	V1	-Small Groups	***Direct Assessment Tool*** Project Presentation (rubric) ***Indirect Assessment Tool*** Course Exit Survey

C. Course Content

No	List of Topics (Lectures)	Contact Hours
1.	Introduction to Quality, Quality control, and Quality Assurance in the software industry.	5
2.	Quality Metrics and Measurements	4
3.	Quality system models 1: ISO, ITIL, CMMI	6
4.	Quality system models 2: ANSI, IEEE, PRINCE2	6
5.	Quality system models 3: ISO 9000	4
6.	Quality Assurance planning	4
7.	Quality Assurance examples	4
8.		
9		
Total		33

No	Lab Topics	Contact Hours
Total		

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Assignment	Weekly	10%
2.	Midterm Exam	6	20%
3.	Final Project and Presentation	11	20%
4.	Final Exam	12	50%

*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	Software Testing And Quality Assurance Theory And Practice, John Wiley & Sons, 2011
Supportive References	Schulmeyer, G. Gordon. Handbook of software quality assurance. Artech House, Inc., 2007.
Electronic Materials	• 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	• Nielsen Norman Group: https://www.nngroup.com/

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	• A classroom or lecture hall with a whiteboard for 25 students.
Technology equipment (projector, smart board, software)	• A digital image projection system with a connection to a desktop computer and laptop computer. • High speed Internet connection
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. •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). • Class visit by Program Leader (indirect)

Assessment Areas/Issues	Assessor	Assessment Methods
		• 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		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

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