هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	Software Testing
Course Code:	SE1504
Program:	Software Engineering
Department:	Software Engineering
College:	Computing and Information
Institution:	Al-Baha University
Version:	*Course Specification Version Number*
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: (8th /3rd year)					
4. Course general Description:					
. This course provides a broad introduction on software testing. The concepts of verification and validation will be studied. In addition, other topics of testing that include black-box, white box, units testing will be explored. Student will also learn the ways of planning and managing the testing process. Furthermore, various testing tools will be explored in this course.					
5. Pre-requirements for this course (if any): SE1503 Software Design and Development 2					
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 software testing. This includes testing types, techniques, issues, tools, and testing planning and managements.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	3	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**	22
2.	**Laboratory/Studio**	22
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		44

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 Verifications & Validation and the difference between them	**K1**	Lecture, exercise	Quiz, exams, ,assignments
1.2	Define knowledge of key techniques, tools, and standards in software testing,	**K2**	Lecture, exercise	Quiz, exams, ,assignments
1.3	Recognize the software system testing planning and management	**K3**	Lecture, exercise	Quiz, exams, ,assignments
2.0				
2.1	Validate and verify software systems using studied techniques, methods, and tools	**S1**	Lecture, Group discussion, tutorials	Exams, assignments, project

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
2.2	Design and manage testing plans for software systems for considerable software size	**S2**	Lecture, Group discussion, tutorials	Exams, assignments, project
2-3	Apply reporting and presentation on a software system testing	**S3**	Lecture, Group discussion, tutorials	Exams, assignments, project
3.0	**Values, autonomy, and responsibility**			
3.1	Demonstrate effective teamwork	**V1**	Project	Assignment, project

C. Course Content

No	List of Topics	Contact jHours
1.	Introduction to Software Testing	2
2.	Verifications & Validation	4
3	Black-box Testing and White-box Testing	2
4	Functional Testing: Unit testing. Integration testing. System testing. Sanity testing. Smoke testing. Interface testing. Regression testing. Beta/acceptance testing.	4
5	Non-functional testing :Performance testing. Load testing. Stress testing. Volume testing. Security testing. Compatibility testing. Install testing. Recovery testing. Reliability testing. Usability testing. Compliance testing. .Localization testing	4
6	Software Testing Process: Planning, Preparation, Execution, and Reporting	2
7	Manual and automated software tests.	2
8	Software testing Tools	2
Total		**22**

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	*Software Testing And Quality Assurance Theory And Practice*, John Wiley & Sons, 2011
Supportive References	Jorgensen, Paul C. "Software Testing A Craftsman's Approach 3rd." USA: AuerbachPiblictions (2007). Beizer, Boris. Software testing techniques. Dreamtech Press, 2003.
Electronic Materials	**N/A**
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)

Assessment Areas/Issues	Assessor	Assessment Methods
		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) 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**