



Course Specification

(Bachelor)

Course Title: **Software Quality and Experience**

Course Code: **IS 1476**

Program: **Bachelor of Information Systems**

Department: **Information systems**

College: **College of Computer and Information Sciences**

Institution: **Imam Mohammad Ibn Saud Islamic University**

Version: **1**

Last Revision Date: **29th April 2026**



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A. General information about the course:

1. Course Identification

1. Credit hours: 3 credit hours (lectures:3)

2. Course type

A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others
B. ☐ Required ☒ Elective

3. Level/year at which this course is offered: 4th Year

4. Course general Description:

This course introduces students to the principles, techniques, and standards of software quality assurance (SQA) and the integration of user experience (UX) into quality engineering processes. It explores modern software quality practices, including testing methodologies, quality models, process improvement frameworks, and usability evaluation. The course emphasizes the relationship between software quality and user experience by covering key topics such as functional and non-functional quality attributes, software testing (both manual and automated), quality standards like ISO/IEC 25010, usability and user-centered quality evaluation, as well as AI-driven testing and quality analytics. Throughout the course, students gain practical experience in designing test cases, evaluating usability, measuring quality metrics, and ensuring software reliability and user satisfaction.

5. Pre-requirements for this course (if any):

IS1474 User Experience

6. Co-requisites for this course (if any):

No Co-requisites

7. Course Main Objective(s):

Understand software quality principles and standards, apply software testing and quality assurance techniques, integrate usability and user experience (UX) into quality evaluation, measure and analyze software quality metrics, use modern tools for testing and quality improvement, and evaluate software systems from both technical and user perspectives.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	3 hours/week	100%
2.	E-learning		
3.	Hybrid		





No	Mode of Instruction	Contact Hours	Percentage
	- Traditional classroom - E-learning		
4.	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	45
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	
5.	Others (specify)	
Total		45

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

Code	Course Learning Outcomes	Code of CLOs aligned with PLOs (Performance Level)	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Understand software quality principles, standards, and models such as ISO/IEC 25010	K1(P)	Class lectures	Quiz, Midterm, Final
1.2	Explain software testing methodologies and quality assurance processes	K2(I)	Class lectures	Midterm, Assignment, Project
1.3	Understand usability and UX as part of software quality attributes	K3(I)	Class lectures	Quiz, Midterm, Project, Final
2.0	Skills			
2.1	Design and execute software test cases	S4(P)	Class lectures	Midterm, Assignment, Project, Final





Code	Course Learning Outcomes	Code of CLOs aligned with PLOs (Performance Level)	Teaching Strategies	Assessment Methods
	using standard techniques			
2.2	Apply usability testing and UX evaluation methods	S4(P)	Class lectures	Project, Assignment, Final
2.3	Analyze software defects and quality metrics	S3(P)	Class lectures	Project, Assignment, Final
3.0	Values, autonomy, and responsibility			
3.1	Work effectively in teams on quality assurance projects	V1(I)	Class lectures	Project
3.2	Communicate quality evaluation results effectively	V3(I)	Class lectures	Project

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to Software Quality and Quality Assurance	4
2.	Software Quality Models and ISO Standards (ISO/IEC 25010)	5
3.	Software Development Life Cycle and Quality Integration	4
4.	Software Testing Fundamentals	5
5.	Test Design Techniques	5
6.	Test Automation and Tools (Selenium, JUnit concepts)	4
7.	Usability Testing and User Experience Evaluation	5
8.	Software Quality Metrics and Measurement	4
9.	Defect Management and Reliability Engineering	3
10.	AI in Software Testing and Quality Analytics	3
11.	Project Discussion	3
Total		45

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quiz	4,11	10%





No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
2.	Midterm Exam	8	20%
3.	Assignment	7	10%
4.	Group Project	15	20%
5.	Final Exam	16	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	1. Software Quality Assurance: From Theory to Implementation (2nd Edition) By: Daniel Galin Publisher: Pearson Pub. Date: 2004 Print ISBN-13: 978-0-321-30564-7 Pages in Print Edition: 600
	2. Foundations of Software Testing: ISTQB Certification (4th Edition) By: Rex Black; Erik van Veenendaal; Dorothy Graham Publisher: Cengage Learning Pub. Date: 2021 Print ISBN-13: 978-1-4737-6491-5 Pages in Print Edition: 240
Supportive References	Software Testing and Quality Assurance: Theory and Practice (2nd Edition) By: Kshirasagar Naik; Priyadarshi Tripathy Publisher: Wiley Pub. Date: 2018 Print ISBN-13: 978-1-118-13265-4 Pages in Print Edition: 616
Electronic Materials	N/A
Other Learning Materials	N/A

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	1. At least 30 seats 2. A projector connected to a PC preferably with Internet connection





Items	Resources
	3. Sliding board
Technology equipment (projector, smart board, software)	N/A
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	Indirect using course evaluation survey
Effectiveness of Students assessment	Faculty members	Direct method using TOS file
Quality of learning resources	Students and Faculty	Indirect using course evaluation survey and faculty survey
The extent to which CLOs have been achieved	Faculty members	Direct method using TOS file
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	IS CURRICULUM APPROVAL & DEVELOPMENT COMMITTEE IS QAC / / IS COUNCIL
REFERENCE NO.	١٤٤٧/٢٨/١ (1447/28/1H)
DATE	MAY 12, 2026

