

COURSE INFORMATION

COURSE CODE	STIWK3024
COURSE NAME	SOFTWARE TESTING & QUALITY ASSURANCE
CREDIT HOURS	4
COURSEWORK %	60
FINAL ASSESSMENT %	40

SYNOPSIS

This course is intended to provide the students with the understanding and practical skills of the methods and tools of software testing and quality assurance. The course emphasis on the testing techniques and Computer Aided Software Engineering (CASE) tools those are applicable to enhance software quality. Topics on managing software configuration are also covered.

OBJECTIVE

1. understand the underlying software testing and quality assurance theories in software development.
2. acquire knowledge and skills to plan, develop, test software applications using appropriate software quality assurance and configuration management practices and tools.

REFERENCE

1. Black, R. , Van Veenendaal, E., & Graham, D. (2015). *Foundations of software testing: ISTQB Certification* : ,Unite:Cengage Learning
2. Perry, W. (2009). *Effective methods for software testing (3rd ed.)* : ,New Y:John Wiley & Sons, Inc
3. Jain, D., and Kothari, A. (2025). *Software Testing and Quality Assurance* (2025) Exploring testing levels, test tools, automation, and quality metrics for improved software quality (English Edition) ,India,India:BPB(pp.252)Retrieved 13/10/2025 from <https://www.amazon.com/Software-Testing-Quality-Assurance-automation/dp/9365892783>
4. Nitin, C, Shah (2019). *Software Quality Assurance and Testing for Beginners* (2019) ,California,Calif: Independently Published(pp.296)Retrieved 13/10/2025 from <https://www.amazon.com/Software-Quality-Assurance-Testing-Beginners/dp/1097280446>

MQA INFORMATION

Identify special requirement or resources to deliver the course (e.g., software, nursery, computer lab, simulation room	This is a majoring course (core elective) for all Bachelor of Science with Honours (Information Technology) [B.Sc. (Hons) (Information Technology)] students.
Transferable skills	Critical Thinking and Problem-Solving Skills, and Communication
Teaching-learning and assessment strategy	Mixed methods between teacher-centered and student-centered. Teaching and learning approaches based on face-to-face, synchronous, and asynchronous teaching and learning.

MAPPING OF COURSE LEARNING OUTCOME (CLO) AND LEARNING TAXONOMY

	Cognitive						Affective					Psychomotor						
	Remember	Understand	Apply	Analyze	Evaluate	Create	Receiving phenomena	Responding to phenomena	Valuing	Organising values	Internalising values	Perception	Set	Guided response	Mechanism	Complex overt response	Adaptation	Origination
	C1	C2	C3	C4	C5	C6	A1	A2	A3	A4	A5	P1	P2	P3	P4	P5	P6	P7
CLO1				/														
CLO2				/														
CLO3									/									

COURSE LEARNING OUTCOME

CLO1 Determine basic concept and latest issues of software testing and quality assurance in software development(C4)

CLO2 Examine the application of software testing techniques, software quality assurance and certification in relation to produce quality software.(C4)

CLO3 Demonstrate the testing process in real life testing environment using appropriate techniques or tools.(A3)

4.6) Incident Management											
5) SOFTWARE METRIC USED IN TESTING 5.1) Describing types of Software Quality Metrics 5.2) Metrics measurement techniques	9.00	0	0	0	2.00	0	0	0	0	11.00	22.00
6) REVIEW, INSPECTION AND AUDIT 6.1) Discussing concept of software review, inspection and audit. 6.2) Demonstrating software review, inspection and audit.	4.00	0	0	0	0	0	0	0	0	4.00	8.00
7) TOOLS SUPPORT IN TESTING 7.1) TESTING TOOLS CONSIDERATION 7.2) EFFECTIVE USE OF TOOLS	4.00	0	0	0	0	0	0	0	0	4.00	8.00
8) STANDARDS, CERTIFICATION AND ASSESSMENT 8.1) Comparing software quality management standards 8.2) Applying SQA Project Process Standards	2.00	0	0	0	0	0	0	0	0	2.00	4.00
	39.00	0.00	0.00	0.00	9.00	0.00	0.00	0.00	8.00	56.00	112.00

SKILLS

1) CLUSTER1 - KNOWLEDGE AND UNDERSTANDING

- 1) Knowledge and Understanding (LOC1)

2) CLUSTER2 - COGNITIVE SKILLS

- 1) Cognitive Skills (LOC2)

3) CLUSTER3 - FUNCTIONALITY WORKS SKILLS

- 1) Communication Skills (LOC3c)

MAPPING OF COURSE LEARNING OUTCOME AND PROGRAM LEARNING OUTCOME

	Program Learning Outcome		
	PLO1	PLO2	PLO5
CLO1	/		
CLO2		/	
CLO3			/

Program Learning Outcome

PLO1 - Analyse concepts, principles and theories relating to Information Technology.

PLO2 - Apply appropriate design and architecture for Information Technology solutions.

PLO5 - Exhibit effective communication with diverse stakeholders.

MAPPING OF COURSE LEARNING OUTCOME (CLO) AND LOC

	CLUSTER1	CLUSTER2	CLUSTER3
	LOC1	LOC2	LOC3c
CLO1	/		
CLO2		/	
CLO3			/

PENGESAHAN

Penyelaras

Disemak dan disediakan oleh:

Tandatangan

Nama:

Tarikh:

Dekan

Disemak dan disediakan oleh:

Tandatangan

Nama:

Tarikh: