Unique LO	LO in Version 2018	K-Level 2018
Chapter 1	**Fundamentals of Testing**	
1.1	**What is Testing?**	
FL-1.1.1	Identify typical objectives of testing (K1)	K1
FL-1.1.2	Differentiate testing from debugging (K2)	K2
1.2	**Why is Testing Necessary?**	
FL-1.2.1	Give examples of why testing is necessary (K2)	K2
FL-1.2.2	Describe the relationship between testing and quality assurance and give examples of how testing contributes to higher quality (K2)	K2
FL-1.2.3	Distinguish between error, defect, and failure (K2)	K2
FL-1.2.4	Distinguish between the root cause of a defect and its effects (K2)	K2
1.3	**Seven Testing Principles**	
FL-1.3.1	Explain the seven testing principles (K2)	K2
1.4	**Test Process**	
FL-1.4.1	Explain the impact of context on the test process (K2)	K2
FL-1.4.2	Describe the test activities and respective tasks within the test process (K2)	K2
FL-1.4.3	Differentiate the work products that support the test process (K2)	K2
FL-1.4.4	Explain the value of maintaining traceability between the test basis and the test work products (K2)	K2
1.5	**The Psychology of Testing**	
FL-1.5.1	Identify the psychological factors that influence the success of testing (K1)	K1
FL-1.5.2	Explain the difference between the mindset required for test activities and the mindset required for development activities (K2)	K2
Chapter 2	**Testing Throughout the Software Development**	
2.1	**Software Development Lifecycle Models**	
FL-2.1.1	Explain the relationships between software development activities and test activities in the software development lifecycle (K2)	K2
FL-2.1.2	Identify reasons why software development lifecycle models must be adapted to the context of project and product characteristics (K1)	K1
2.2	**Test Levels**	
FL-2.2.1	Compare the different test levels from the perspective of objectives, test basis, test objects, typical defects and failures, and approaches and responsibilities (K2)	K2
2.3	**Test Types**	
FL-2.3.1	Compare functional, non-functional and white-box testing (K2)	K2
FL-2.3.2	Recognize that functional, non-functional and white-box tests occur at any test level (K1)	K1
FL-2.3.3	Compare the purposes of confirmation testing and regression testing	K2
2.4	**Maintenance Testing**	
FL-2.4.1	Summarize triggers for maintenance testing (K2)	K2
FL-2.4.2	Describe the role of impact analysis in maintenenace testing (K2)	K2
Chapter 3	**Static Testing**	
3.1	**Static Testing Basics**	
FL-3.1.1	Recognize types of software work product that can be examined by the different static testing techniques (K1)	K1
FL-3.1.2	Use examples to describe the value of static testing (K2)	K2
FL-3.1.3	Explain the difference between static and dynamic techniques, considering objectives, types of defects to be identified, and the role of these techniques within the software lifecycle (K2)	K2
3.2	**Review Process**	
FL-3.2.1	Summarize the activities of the work product review process (K2)	K2

FL-3.2.2	Recognize the different roles and responsibilities in a formal	K1
FL-3.2.3	Explain the differences between different review types: informal review, walkthrough, technical review and inspection (K2)	K2
FL-3.2.4	Apply a review technique to a work product to find defects (K3)	K3
FL-3.2.5	Explain the factors that contribute to a successful review (K2)	K2
Chapter 4	**Test Techniques**	
4.1	**Categories of Test Techniques**	
FL-4.1.1	Explain the characteristics, commonalities, and differences between black-box test techniques, white-box test techniques and experience-based test techniques (K2)	K2
4.2	**Black-box Test Techniques**	
FL-4.2.1	Apply equivalence partitioning to derive test cases from given requirements (K3)	K3
FL-4.2.2	Apply boundary value analysis to derive test cases from given requirements (K3)	K3
FL-4.2.3	Apply decision table testing to derive test cases from given requirements (K3)	K3
FL-4.2.4	Apply state transition testing to derive test cases from given requirements (K3)	K3
FL-4.2.5	Explain how to derive test cases from a use case (K2)	K2
4.3	**White-box Test Techniques**	
FL-4.3.1	Explain statement coverage (K2)	K2
FL-4.3.2	Explain decision coverage (K2)	K2
FL-4.3.3	Explain the value of statement and decision coverage (K2)	K2
4.4	**Experience-based Test Techniques**	
FL-4.4.1	Explain error guessing (K2)	K2
FL-4.4.2	Explain exploratory testing (K2)	K2
FL-4.4.3	Explain checklist-based testing (K2)	K2
Chapter 5	**Test Management**	
5.1	**Test Organization**	
FL-5.1.1	Explain the benefits and drawbacks of independent testing (K2)	K2
FL-5.1.2	Identify the tasks of a test manager and tester (K1)	K1
5.2	**Test Planning and Estimation**	
FL-5.2.1	Summarize the purpose and content of a test plan (K2)	K2
FL-5.2.2	Differentiate between various test approaches (K2)	K2
FL-5.2.3	Give examples of potential entry and exit criteria (K2)	K2
FL-5.2.4	Apply knowledge of prioritization, and technical and logical dependencies, to schedule test execution for a given set of test cases	K3
FL-5.2.5	Identify factors that influence the effort related to testing (K1)	K1
FL-5.2.6	Explain the difference between two estimation techniques: the metrics-based technique and the expert-based technique (K2)	K2
5.3	**Test Monitoring and Control**	
FL-5.3.1	Recall metrics used for testing (K1)	K1
FL-5.3.2	Summarize the purposes, contents, and audiences for test reports (K2)	K2
5.4	**Configuration Management**	
FL-5.4.1	Summarize how configuration management supports testing (K2)	K2
5.5	**Risks and Testing**	
FL-5.5.1	Define risk level by using likelihood and impact (K1)	K1
FL-5.5.2	Distinguish between project and product risks (K2)	K2
FL-5.5.3	Describe, by using examples, how product risk analysis may influence thoroughness and scope of testing (K2)	K2
5.6	**Defect Management**	

FL-5.6.1	Write a defect report, covering defects found during testing (K3)	K3
Chapter 6	**Tool Support for Testing**	
6.1	**Test tool considerations**	
FL-6.1.1	Classify test tools according to their purpose and the test activities they support (K2)	K2
FL-6.1.2	Identify benefits and risks of test automation (K1)	K1
FL-6.1.3	Remember special considerations for test execution and test management tools (K1)	K1
6.2	**Effective use of tools**	
FL-6.2.1	Identify the main principles for selecting a tool (K1)	K1
FL-6.2.2	Recall the objectives for using pilot projects to introduce tools (K1)	K1
FL-6.2.3	Identify the success factors for evaluation, implementation, deployment and on-going support of test tools in an organization (K1)	K1