

ISTQB/ISEB Software Testing Foundation Certificate

Course Specifications

Course length: 3 days

Certification: Certified Software Tester

Course Description

ISEB Software Testing Foundation is a theoretical course that introduces the fundamental testing principles including details of the test process. One will learn how to apply testing throughout the project development lifecycle so that costly bugs are identified as early as possible. Hands-on experience on how to use test case design techniques to derive test cases for white box and black box test execution will be provided. Finally, one will learn how to manage a testing process and select a test tool that will support a test process.

Target Student: This course is intended for students with little or no experience in software testing who would like to pursue a career in Software Testing and/or Quality Assurance. It is also aimed at students who want to brush up their skills before sitting for and ISTQB/ISEB certification exam.

Prerequisites: In order to take this course, you need to be familiar with your computer's operating system, basic operation and use of different software tools.

Delivery Method: Instructor-led, group-paced, classroom-delivery learning model with structured hands-on activities.

Benefits: After completing this course, students will have a clear idea of a Fundamental Test Process, they will know how to write a test plan for a specific project, derive and document a set of test cases from specifications and internal structure of the system modules.

Certification

This course prepares students for the Prometric Exam ISEB ISTQB Certificate in Software Testing Certificate in Software Testing (**BH0-004**). Computer based exams can be scheduled at a Prometric testing centre such as ExecuTrain. The exam fee is NOT included in the course price.

Performance-Based Objectives

- Explain Why Testing is Necessary and what are the fundamental testing principles, recall the common objectives of testing, main test activities and main psychological factors that influence testing outcomes.
- Understand the relationship between development, test activities and work products in the development life cycle, compare the different levels of testing and test types, describe the role of regression testing and impact analysis in maintenance.
- Explain the differences between different types of review: informal review, technical review, walkthrough and inspection.
- Describe the objective of static analysis and compare it to dynamic testing, recall typical defects and errors identified by static analysis and compare them to reviews and dynamic testing.
- Write test cases containing an expected result and showing a clear traceability to the requirements, clear priorities and logical and technical dependencies
- Explain the characteristics and differences between specification-based testing, structure-based testing and experience-based testing.
- Write test cases from given software models using equivalence partitioning; boundary value analysis; decision tables; state transition diagrams.
- Write test cases from given control flows using coverage techniques: statement testing and decision testing; assess statement and decision coverage for completeness.
- Recall the tasks of typical test leader and tester
- Summarize the purpose and content of the test plan, test design specification and test procedure documents according to the 'Standard for Software Test Documentation' (IEEE 829).
- Differentiate between two conceptually different estimation approaches: the metrics-based approach and the expert-based approach.
- Understand and interpret test metrics for test reporting and test control (e.g. defects found and fixed, and tests passed and failed) that will be included into the test evaluation summary report
- Summarize how configuration management supports testing.
- Describe, using examples, how risk analysis and risk management may be used for test planning.
- Classify different types of test tools according to the test process activities; learn the main principles of introducing a tool into an organization.

Course Content

Lesson 1: Fundamentals of Testing

- Why is testing necessary
- What is testing?
- General testing principles
- Fundamental test process
- The psychology of testing

Lesson 2: Testing throughout the software lifecycle

- Software development models
- Test levels
- Test types: the targets of testing
- Maintenance testing

Lesson 3: Static Techniques

- Reviews and the test process
- The review process
- Static analysis by tools

Lesson 4: Test design techniques

- Identifying test conditions and designing test cases
- Categories of test design techniques
- Specification-based or black-box techniques
- Structure-based or white-box techniques
- Experience-based techniques
- Choosing test techniques

Lesson 5: Test design techniques

- Test organization
- Test planning and estimation
- Test progress monitoring and control
- Configuration Management
- Risk and testing
- Incident management

Lesson 6: Tool support for testing

- Types of test tool
- Effective use of tools: benefits and risks
- Introducing a tool into an organization

Lesson 7: ISTQB Foundation Exam

- Preparing for the exam
- Taking the exam
- Mock exam

Appendix A:

- The Foundation Certificate in Software Testing syllabus

Appendix B:

- Glossary of Software Testing Terms