



## Agile Tester Foundation Course Outline

### General Description

This course provides testers and test managers with an understanding of the fundamentals of testing on agile projects. Attendees will learn how agile software development projects are organized, and the various types of agile development practices in common use. They will understand how agile development differs from traditional approaches, how to position testers in an agile organization, the fundamental agile testing principles, practices, and processes, and the skills they'll need to excel in an agile environment. The attendees will learn ways to estimate and organize testing within agile projects and the application of risk-based testing on agile projects. They'll also gain a basic understanding of the important testing and test-related tools commonly used on agile projects.

This course is ideal for testers experienced with traditional software lifecycles, entry-level testers with an interest in agile testing, and experienced developers with a lot to a little knowledge of testing who work in agile projects. Testers, test analysts, test engineers, test consultants, test managers, user acceptance testers, and software developers working in agile organizations will find this course useful, informative, and fun. The ISTQB Foundation Level certificate is a prerequisite to take the ISTQB Foundation Level Extension Agile Tester exam (held at the end of the last day), but non-certificate holders can take and benefit from the course.

By the end of this course, an attendee should be able to:

- Collaborate in an agile team, being familiar with agile principles and practices
- Adapt existing testing experience, knowledge, and best practices to agile projects
- Support the agile team in planning test-related activities
- Apply relevant test methods and techniques
- Assist in test automation

- Help business stakeholders define understandable and testable user stories and acceptance criteria
- Collaborate and share information with other team members
- Work effectively within an agile team and environment

Created by Rex Black, President of RBCS, Inc. ([www.rbc-us.com](http://www.rbc-us.com)), past President of the International Software Testing Qualifications Board ([www.istqb.org](http://www.istqb.org)), past President of the American Software Testing Qualifications Board ([www.astqb.org](http://www.astqb.org)), Chair of the ISTQB Agile Tester Working Group, and co-author of the ISTQB Foundation Level Extension Agile Tester Syllabus, this course is also ideal for testers and test teams preparing for certification. It covers the ISTQB Foundation Level Extension Agile Tester Syllabus 2014, and will be submitted for accreditation to an ISTQB-recognized National Board upon formal release of the ISTQB Foundation Level Extension Agile Tester Syllabus 2014.

## Learning Objectives

Through presentation, discussion, practice exam questions, and hands-on exercises, attendees will learn how to:

- Apply concepts from the ISTQB Foundation Level in an agile project
- Recall the basic concept of agile software development based on the Agile Manifesto
- Understand the advantages of the whole-team approach
- Understand the benefits of early and frequent feedback
- Recall agile software development approaches
- Write user stories in collaboration with development, business representatives, and product owners
- Understand how retrospectives can be used as a mechanism for process improvement in agile projects
- Understand the use and purpose of continuous integration
- Know the differences between iteration and release planning, and how a tester adds value in each of these activities
- Describe the differences between testing activities in agile projects and non-agile projects
- Describe how coding and testing activities are integrated in agile projects
- Describe the role of independent testing in agile projects

- Describe the basic set of work products used to communicate the status of testing in an agile project, including test progress and product quality
- Describe the process of evolving tests across multiple iterations and explain why test automation is important to manage regression risk in agile projects
- Understand the skills (people, domain, and testing) of a tester in an Agile team
- Understand the role of a tester within an agile team
- Recall the concepts of test-driven development, acceptance test-driven development, and behavior-driven development
- Recall the concepts of the test pyramid
- Summarize the testing quadrants and their relationships with testing levels and testing types
- For a given agile project, practice the role of a tester in a Scrum team
- Assess product quality risks within an agile project
- Estimate testing effort based on iteration content and product quality risks
- Interpret relevant information to support testing activities
- Explain to business stakeholders how to define testable acceptance criteria
- Given a user story, write acceptance test-driven development test cases
- For both functional and non-functional behavior, write test cases using black box test design techniques based on given user stories
- Execute exploratory testing to support the testing of an agile project
- Recall different tools available to testers according to their purpose and to activities in agile projects

## Course Materials

This course includes the following materials, either as hardcopy or via electronic copy:

<i>Name</i>	<i>Description</i>
Course Outline	A general description of the course along with learning objectives, course materials, and an outline of the course topics, including approximate timings for each chapter.

## Course Outline

<i>Name</i>	<i>Description</i>
Noteset	A set of approximately 200 PowerPoint slides covering the topics to be addressed.
ISTQB Foundation Level Extension Agile Tester Syllabus	The syllabus which forms the basis for the International Software Testing Qualification at the Foundation Level Extension for Agile Testers.
Foundation Mock Exam	A practice exam containing 40 questions and answers to provide a review of the ISTQB Foundation exam.
ISTQB Glossary	The latest glossary of terms used in software testing produced by the ISTQB.
Agile Tester Foundation Sample Exam Questions	A complete set of questions for every learning objective in the ISTQB Foundation Level Extension Agile Tester Syllabus.
Exercise Solutions	Solutions for all exercises in the course (included in the noteset).
Agile Tester Foundation Mock Exam	A practice exam containing questions and answers to assess your readiness for the ISTQB Foundation Level Extension Agile Tester exam.
Project Source Documents for Course Exercises	Specifications used in the realistic example project used in exercises for the course.
Bibliography and resources	A set of further readings, Web sites, tools and other resources to help implement the concepts.

The printed course materials are provided in a binder in a way which makes it convenient for course attendees to remove portions as needed for reference; e.g., during exercises.

### Session Plan

The course runs for two days, with one hour set aside on the second day for the ISTQB Agile Tester Foundation exam if desired. Each day is about 360 minutes of class time, from 9:00 to 5:30. For accredited course offerings, material is covered as described. For custom courses, material may be deleted, added, or expanded upon as needed.

Please note that timings are approximate, depending on attendee interest and discussion. All of the lectures include either exercises, knowledge-check sample questions, or both.

The following shows this session plan in relationship to the chapters and sections of the ISTQB Foundation Level Extension Agile Tester Syllabus. The specific order in which topics are presented may vary to optimize the attendees' learning experience.

- Introduction (30 minutes)**
- 1 Agile Software Development (150 minutes)**
  - 1.1 The Fundamentals of Agile Software Development
  - 1.2 Aspects of Agile Approaches
- 2 Fundamental Agile Testing Principles, Practices, and Processes (105 minutes)**
  - 2.1 The Differences between Testing in Traditional and Agile Approaches
  - 2.2 Status of Testing in Agile Projects
  - 2.3 Role and Skills of a Tester in an Agile Team
- 3 Agile Testing Methods, Techniques, and Tools (480 minutes)**
  - 3.1 Agile Testing Methods
  - 3.2 Assessing Quality Risks and Estimating Test Effort
  - 3.3 Techniques in Agile Projects
  - 3.4 Tools in Agile Projects
- ISTQB Foundation Level Extension Agile Tester Exam (60 minutes)**

## Recommended Readings

The class materials include a bibliography of books related to software testing, agile project management, quality, and other topics of interest to the test professional.