



# Agile Testing Fundamentals

*Applying Testing Best Practices to Agile Projects*

## Description

Effective software testing is critical to the success of agile development projects. Unlike traditional software development approaches, agile incorporates testing into the entire lifecycle and asks developers and testers to work together to perform a variety of testing activities. Many testers struggle to understand their role within agile projects and how to best apply their testing knowledge and experiences within the agile paradigm.

This course prepares you to be an effective member of an agile team by teaching you everything you need to know about agile software testing. Learn the fundamentals of agile, how quality is viewed and achieved within agile projects, and the role that effective testers play during the development process. Understand how to plan and execute a variety of necessary testing activities to support the development process and effectively critique the product during short development iterations. Explore key agile testing techniques such as:

- Test Driven Development (TDD),
- Acceptance Test Driven Development (ATDD),
- Iterative testing of non-functional requirements, and
- Exploratory Testing

Learn how to best automate your tests and integrate them into your build process. Understand the role of quality metrics within agile and how to wield them effectively. Leave this course with an understanding of how to apply testing best practices to agile projects.

## Hands-On Experience

During *Agile Testing Fundamentals*, you will explore agile testing tools and techniques through a variety of examples and hands-on exercises. Participants will work in small groups to plan and execute tests within an agile development process.

## Who Should Attend?

This course is appropriate for both novice and experienced software testers. Developers expected to test within agile teams will find this course extremely useful. Test and development managers also will benefit from this course. A background of basic development and testing processes is helpful.



### 3-Day Course Outline

#### Fundamentals of Agile

- Understanding Agile
- The Agile Manifesto
- Benefits of Agile
- Challenges when Adopting Agile
- Myths About Agile
- Agile Development Process
- The Role of Testers in Agile

#### Agile Project Planning & Requirements

- SCRUM
- Overall Project Planning Process
- Backlogs
- User Stories
- Release Planning
- Test Strategy and Planning
  - Agile Test Planning Exercise

#### Agile Testing Techniques

- Extreme Programming (XP) Paradigm
- Agile Testing Quadrants
- Test-Driven Development (TDD) and Unit Testing
  - TDD Exercise
- Acceptance Test-Driven Development (ATDD)
  - ATDD Exercise
- Testing Business Process and Scenarios
- Exploratory Testing
  - Exploratory Testing Exercise
- Testing Non-functional Requirements
  - Security Testing Exercise

#### Test Automation

- Continuous Integration & Deployment



- SecureCI Demo
- Agile Test Automation Pyramid
- Test Automation Strategy & Frameworks
  - Examples of Frameworks
- Automating Unit and Component Tests
  - Implementing TDD Exercise
- Automating Story Tests
  - Implementing ATDD Exercise
- Automating System Tests
  - Demo of UI Testing
- Automation to Support Exploratory Testing
  - Demo of Database Setup / Teardown
- Automation and Non-Functional Requirements
  - Security Analysis Demo

#### Testing During Sprints & Releases

- Sprint Planning
- Developer vs. Tester Roles during Testing
- Team Collaboration
- Defect Tracking
- Metrics and Dashboards
- Virtual and Physical Test Environments
- Regression Testing
- Test Reporting
- Testing During Release Cycles

#### Beyond the Project

- Role of Test Managers in Agile
- Testing on Distributed Teams
- Integration with Other Systems / Projects

#### **Contact Us for More Information:**

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