

- Learn practical steps to reduce quality issues and meet release dates and budgets
- Shift your testing activities left to find bugs sooner
- Improve collaboration between the developers and testers
- Get hands-on experience with Visual Studio 2019, Azure DevOps Services, and common marketplace tools.

Through a combination of lecture, demonstrations, and team-based exercises, learn to deliver high-quality increments of software on regular iterations using the tools found in Visual Studio, Azure DevOps Services, and the community marketplace. This three-day course provides students with practical software testing techniques and technical skills, as well as exposure to Test-Driven Development (TDD), Acceptance Test-Driven Development (ATDD), Test Impact Analysis, Continuous Integration (CI), and more.

Understand and practice development testing acceptance testing, and exploratory testing. Create automated acceptance tests in Visual Studio, use SpecFlow to automate acceptance testing, and learn to use Microsoft Test Runner. Learn to plan and track work, manage test cases, and more utilizing Azure DevOps Services and associated tools.

## Who Should Attend

This course is appropriate for all members of a software development team, especially those performing testing activities. This course also provides value for non-testers (developers, designers, managers, etc.) who want a better understanding of what agile software testing involves.

*This is an independent course and is neither affiliated with, nor authorized, sponsored, or approved by, Microsoft Corporation.*

## Course Outline

---

### Agile Software Testing

- Overview of agile software development
- The agile tester and agile testing practices
- Different types of testing
- Introduction to Azure DevOps Services
- Agile requirements and acceptance criteria
- Creating, organizing, and managing a backlog

### Planning and Tracking Quality

- Defining quality software
- Introduction to Azure Boards
- Forecasting and planning a sprint
- Introduction to Azure Test Plans
- Organizing testing using test plans and suites
- Creating and managing test cases
- Leveraging parameters and shared steps
- Importing and exporting test artifacts
- Triaging and reporting bugs

### Exploratory Tests

- Introduction to exploratory tests
- Using the Microsoft Test & Feedback extension
- Connected mode vs. standalone mode
- Exploring work items
- Capturing rich data during an exploratory session
- Exploratory testing “tours”
- Requesting and providing stakeholder feedback

### Build and Release Testing

- Introduction to Azure Pipelines
- Automated builds using build pipelines
- Running automated tests in the pipeline
- Practicing Continuous Integration (CI)
- Leveraging Test Impact Analysis
- Automated releases using release pipelines
- Creating, deploying, and testing a release
- Viewing and managing a deployment

## **Development Tests**

- Introduction to development tests
- Unit testing in Visual Studio
- Data-driven unit tests
- Analyzing code coverage
- Practicing Test-Driven Development (TDD)
- Concurrent testing (Live Unit Testing and NCrunch)

## **Acceptance Tests**

- Introduction to acceptance tests
- Acceptance criteria and definition of "done"
- Acceptance Test-Driven Development (ATDD)
- Using SpecFlow to automate acceptance testing
- Using Selenium for web UI testing
- Using Appium for desktop UI testing
- Manually testing web and desktop applications
- Performance testing and load testing

## **Reporting**

- Agile metrics that matter
- Configuring alerts and notifications
- Using the Microsoft Analytics extension
- Ad-hoc reporting using Excel and Power BI
- Querying data using the REST API

## **Delivering Quality Software**

- Understanding and avoiding technical debt
- Detecting and measuring technical debt
- Defining and obeying a definition of "done"
- Overcoming dysfunctional team behaviors
- Becoming a high-performance team
- Case studies

**Price:** \$1995