Agile Testing

Course Overview
This course covers an overview or Agile, and then takes a deep dive into Agile Testing techniques and the role of the Agile Tester. The course can be customized to include intensive hands on sessions in TDD, ATDD, and Mocks.

Key Outcomes
During this course, participants will:
- Gain a basic understanding of Agile
- Learn the Scrum Fundamentals, Artifacts, and Roles
- Understand the role of a tester on an Agile team
- Learn the Agile Testing Pyramid
- Get some exposure to Agile testing tools
- Compare Test Driven Development (TDD), Acceptance Test Driven Development (ATDD), and Behavior Driven Development (BDD)

Course Outline

Agile Overview
- The Agile Potential
- The Agile Manifesto
- Agile alone is NOT enough
- Can Agile fail?
- THE Best Agile

Scrum Overview (covers roles, artifacts, and ceremonies)
- Stories – Making It Manageable
  - Stories
  - Acceptance Criteria – where and when
  - Why Object Oriented Principles Are Critical To Agile
  - Sprint Planning Meeting
  - Just Enough and no more
  - Controlling Chaos
- Sprint
  - Creating a Sense Of Urgency
  - Driving Your Project
  - Conducting the Daily Scrum
  - Chickens and Pigs
  - Life Is Daily!
  - Doing Iterative Development
  - Design
  - Test
  - Code
  - Refactor
  - Sprint Review Meeting

Product Owner: Roles and Responsibilities
- Requirements and the Product Backlog
  - Building a Product Backlog
  - User Roles and Personas
  - Acceptance Criteria
  - Story Workshops
  - Story Aggregation and Decomposition
  - Spikes and Special Stories

At-a-Glance:
Course Length: 5 days
Course Number & Level: 243.AGT5 – Proficient
Professional Development Units (PDUs): 35 (Technical)
Delivery Options:
- Instructor-led Training (Delivered Onsite at Your Location)
Agile Tester Roles and Responsibilities
- Overlapping roles
- Testers should be on the team
- Test Plans
- The End Game

Whole Team Approach
- Team commitment to quality
- Teams test
- Pairing testers and developers

The Agile Testing Pyramid
- Agile Testing Quadrants
- Unit Test
- Acceptance Test
- GUI Test
- Manual Test

Overview of Test Automation and Automation Tools
- JUnit and Testing First (TDD)
- Continuous Integration
- Acceptance Testing (ATDD)
- Behavior Driven Development (BDD)
- Brief overview of tools

Exploratory Testing
- Exploratory vs. Scripting
- Concurrent design and execution
- Motivation for exploratory testing

Test Driven Development
- Definitions and Uses of Test Driven Development
- Principles and Techniques of Test Driven Development
- Test Driven Development Benefits
- Best Practices in Test Driven Development
- Test Driven Developments Anti-Patterns

Mock Objects
- Mock Objects - why?
- Test Fakes, Stubs, Doubles
- Collaborating Objects – testing the code in the middle
- Suggested tools to help

Acceptance Test Driven Development (ATDD)
- Choose your story
- Writing test(s) for your story
- Consider automating the tests
- Implementing the functionality
  - The ATTD micro-cycle
  - To Mock or not to Mock
- What can go wrong
  - Iteration planning
  - Epic planning
  - Managing scope
- Knowing when you're done