

Learning Objectives

The course will cover the following Learning Objectives:

| Learning Objective | K Level |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Given a particular Agile project scenario be able to report Test Progress, Planned testing activities, Testing Constraints and obstacles impacting testing, during the daily scrum. | 3 |
| Explain how the problems typically encountered on traditional development projects are addressed in agile projects. | 2 |
| Summarise the agile manifesto. | 2 |
| Explain the agile principles. | 2 |
| Understand the level of detail that needs to be captured for the test and what needs to be recorded / documented. | 2 |
| Distinguish between the following agile methods / methodologies / frameworks – Scrum, XP, Lean, and Kanban. | 2 |
| Model the ideal Scrum development process as a set of development, test and management sub processes. | 4 |
| Rearrange the 'ideal' Scrum development process to cope with typical project constraints. | 5 |
| Discuss the roles of the different stakeholders involved in an agile project. | 2 |
| Identify those activities performed on an Agile project which are the primary responsibility of the tester. | 4 |
| Compare the role of the test manager on a traditional project with how the role is performed in an agile project. | 4 |
| Assess the quality of User Stories and provide feedback on their deficiencies. | 6 |
| Identify those soft skills required by agile team members to successfully deliver completed products. | 4 |
| When conducting an Iteration Review meeting, understand the roles and responsibilities for the Agile team members. | 2 |
| For a given initial project scenario be able to identify those methodologies, resources, infrastructure, roles and requirements that need to be set up in iteration 0. | 4 |
| Understand the need for planned releases (of several iterations' work) as part of agile development. | 2 |



| Learning Objective | K Level |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Given the team velocity and a number of stories (User, Technical, Fixes, etc.) the tester will either: plan the scope of the release for a fixed release date; or plan the date of the release for a fixed release scope. | 3 |
| Analyse the options available to represent a given Agile development and test process as a Task board. | 4 |
| Explain the purpose of a test strategy on an agile project. | 2 |
| For a given set of project attributes and constraints, identify a suitable set of project-wide test completion criteria. | 4 |
| Estimate the testing effort, (measuring in story points for release planning and time based for iteration planning), required to test a given story/task using following techniques: rule of thumb and poker planning. | 4 |
| Given a Product Backlog consisting of a number of stories (User, Technical, Fixes, etc.), the tester will be able to contribute to the selection of an appropriate subset based on high-level estimates for the testing effort and the (competing) resources needed to complete the testing of the stories. | 4 |
| Making use of an Iteration Backlog made up of a number of stories along with corresponding estimates, constraints and a defined development & test process, be able to plan the resourcing of test activities for an iteration. | 5 |
| Explain the difference between a release burn-down chart and an iteration burn-down chart. | 2 |
| Given a current set of progress data for an iteration create an iteration burn-down chart to reflect current status of the iteration against expected team velocity. | 3 |
| Analyse iteration burn-down charts to identify anomalous activities which may require action by the team. | 4 |
| Explain which organisational, project and story attributes are used to decide on the acceptance criteria for a User Story so that it can be marked as “done”. | 2 |
| Create an agile task board based on a given agile development and test process and typical project progress information. | 4 |
| Given a particular project scenario and a User Story, be able to determine a suitable set of systematic and exploratory test techniques and test completion criteria for the story. Systematic Techniques: Equivalence Partitioning, Boundary Value Analysis, State Transition Testing and Decision Table Testing | 4 |

| Learning Objective | K Level |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Considering specified project constraints and a given User Story, be able to apply systematic and exploratory testing techniques to story implementations. | 3 |
| Given information gathered in an iteration, be able to identify how this can be used to improve the testing. | 4 |
| Calculate team velocity based on given measures for an agile project. | 3 |
| Understand how the Test Driven Development (TDD) approach to code implementation is applied. | 2 |
| Understand how the tester can support Test Driven Design and what value this will add. | 2 |
| Understand the need for continuous integration and how this will impact on your testing and the environments. | 2 |
| Comprehend the relationship between version management and the testing activities required to mitigate these. | 2 |
| Understand how pairing techniques are used to improve the effectiveness and efficiency of agile team members, improving the overall quality of the delivered product. | 2 |
| Regression testing is challenging within the Agile project, explain what factors impact on the amount of regression testing that will need to be completed. | 3 |
| Apply a Regression Strategy to create the tasks required to complete the Regression testing required. | 3 |
| Defect management in an Agile project is often different from traditional projects, explain what these differences are and what factors impact on the amount of information that needs to be recorded. | 3 |
| Communicate defect information clearly and effectively to the appropriate team member in a suitable manner for a given set of circumstances. | 5 |
| Understand why it is essential to have test automation within an Agile project. | 2 |
| Understand the necessity and scope of test automation support. | 2 |
| Determine what needs to be automated within the testing. | 4 |
| Understand what is required to be able to analyse the results from automated scripts to take appropriate actions. | 4 |
| Given a user story and specified project constraints, be able to identify appropriate non-functional testing techniques. | 4 |
| Given a user story and specified project constraints, be able to apply appropriate non-functional testing techniques to story implementations. Consider quality attributes: Performance and Usability. | 3 |



| Learning Objective | K Level |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Understand how tools can support an Agile project. | 2 |
| Distinguish between technical and testing debt. | 2 |
| Explore the reasons why debt (either technical or testing) may occur and what corrective activities can be put in place to reduce the current debt and improve processes to ensure that new debt does not build. | 4 |
| Understand what additional skills an Agile tester requires over and above those of a traditional tester. | 2 |
| Understand the options available for Agile team structures. | 2 |
| Understand the importance of communication and collaboration within an Agile team. | 2 |
| Understand the issues related to distributed (non co- located) Agile teams. | 2 |
| Recognise the risks involved when you scale Agile to deliver large projects and what you can do to mitigate them. | 3 |