BCS Agile Foundation Course Syllabus

DevOpsGroup Academy 2018
With the most comprehensive Agile curriculum in the market, the BCS Agile certification programme supports the whole organisation in making an Agile transformation that delivers value straight away.

The BCS foundation certificate ensures a broad understanding of Agile principles and methodologies. Designed for business professionals and people new to Agile, it creates a common ground for those wanting to improve capability within their organisation.

The certificate introduces candidates to the fundamental concepts and values of Agile, then challenges conventional thinking and application to promote deeper understanding.

Learning Objectives

At the end of this course you will be able to:

• Recall the origins of Agile methods.
• Understand and apply the core values and principles of Agile methods.
• Know the difference between the defined process and the empirical processes used in Agile.
• Explain the issues identified in the traditional / waterfall approach.
• Recognise myths that are often attributed with Agile practices. Know the different approaches to the empirical model for improvement and change.
• Explain the business culture and the economic case required for Agile.
• Understand the implication of Agile practices on individuals, teams and businesses.
• Explain the way in which we engage customers into an Agile project.
• Know how we respond to change in an Agile project.
• Describe the common Agile roles, techniques and practices.
1. The Agile Manifesto (5%, K1)
   1.1 The 4 Values
   1.2 The 12 Principles

The Agile Manifesto is a set of 4 values and 12 principles that encapsulate the mindset and philosophy at the core of the Agile movement and its different methods.

2. Rationale & Benefits of Agile (30%, K3)
   2.1 History of Agile
   2.2 Empirical and defined processes
   2.3 The pillars of the empirical process
   2.4 The waterfall approach
   2.5 The iron triangle of project constraints
   2.6 Working with uncertainty and volatility
   2.7 Agile myths
   2.8 Empirical models for improvement and change
   2.9 Business culture and Agile
   2.10 The economic case for Agile
   2.11 The lifecycle of product development

The Agile Manifesto was created in 2001 as an amalgamation of knowledge drawn from many different sources such as the empirical process, Lean Manufacturing and Extreme Programming to name a few. Agile is an umbrella term describing an approach to work built around transparency, inspection, adaption, collaboration and frequent releases that is ideally suited to complex and complicated working environments typical of the knowledge industry such as Information Technology.

This section will introduce the rationale behind Agile, its applicability to IT and other relevant industries. It will cover how Agile can help deliver better products compared to traditional approaches and the different models for improvement and change as well as how different business cultures may embrace or resist the introduction of Agile practices.

3. Individuals and their Interactions over Processes and Tools (5%, K3)
   3.1 Motivated and Talented Individuals
   3.2 Emergent design from Self-Organising Teams

Agile puts a very significant emphasis in the human dimension of work. One of its key values reinforces the preference for focus on people and how people work together to deliver improved products. This section will introduce and elaborate on why this is the case.
4. Working Systems over Comprehensive Documentation (5%, K3)

4.1 Satisfy the Customer with Continuous Delivery of Value
4.2 Deliver Working Systems Frequently
4.3 Working Systems as a Measure of Progress
4.4 Technical Excellence and Good Design

The Agile Manifesto refers to the term ‘Working Software’. As Agile is not limited to software development, for the purpose of this syllabus we shall refer to ‘Working Systems’. The delivery of working valuable system / product is a key measure of success for an Agile development. This section will introduce these values and elaborate on how the delivery of value will enforce the success of Agile development.

5. Customer Collaboration over Contract Negotiations (5%, K3)

5.1 Business People and Developers Must Work Together
5.2 Face-to-face Communications
5.3 Reflect and Adjust Regularly

Successful Agile projects need to have productive collaboration between the development team and the customer. This section will explain how business people need to engage into an Agile project, and how to maintain good communication.

6. Responding to Change over Following a Plan (5%, K3)

6.1 Embrace Change
6.2 Sustainable Pace
6.3 Simplicity – The Art of Maximising the Amount of Work Not Done

An advantage of Agile practice is the ability to manage changing requirements. This section will explain how changing requirements are accepted, without the development team being overworked.

7. Common Agile Roles (10%, K3)

7.1 The Role of the Customer
7.2 The Role of the Team
7.3 The Role of the Agile Leader
7.4 The Role of Stakeholders
7.5 The Agile Mindset

The roles of individuals in an Agile project are important to establish and understand. This section will explain the roles of Customers, Team members, Agile Leaders and Stakeholders. Explaining the generic mind-set and specific roles for differing methodologies.

8. Common Agile Techniques (15%, K3)

8.1 User Stories
8.2 Acceptance Criteria and Scenarios
8.3 MoSCoW Prioritisation
8.4 Estimation using Story Points
8.5 Agile quality assurance and testing

Defining the requirements in an Agile project is an emergent process. This section will examine the techniques used to create requirements as user stories, estimate and prioritise them in the Agile emergent way.

9. Common Agile Practices (10%, K3)

9.1 Short Feedback Loops
9.2 Focus on Quality
9.3 Emergent Documentation
9.4 Visual Boards
9.5 Team Synchronisation Meeting
9.6 Show and Tells
9.7 Retrospectives
9.8 Continuous Improvement
There are several practices that are required of an Agile development team to fulfill the values and principles of Agile and the empirical process. This section we go through the Agile practices used by an Agile team, such as Timeboxing, Definition of Done, Enough Design Up Front, Big Visible Charts, Reviews and Retrospectives.

10. Relevant Methods and Approaches for Agile Teams (10%, K2)

10.1 Scrum
10.2 XP
10.3 DSDM Atern
10.4 Kanban
10.5 Lean
10.6 Lean Startup

There are several established methods, frameworks and approaches sympathetic to the principles and values of the Agile Manifesto. This section briefly introduces each of these.
**Levels of Knowledge / SFIA Levels**

This course will provide candidates with the levels of difficulty / knowledge skill highlighted within the following table, enabling them to develop the skills to operate at the levels of responsibility indicated.

The levels of knowledge and SFIA levels are explained on the BCS website: [http://www.bcs.org/levels](http://www.bcs.org/levels)

The levels of knowledge above will enable candidates to develop the following levels of skill to be able to operate at the following levels of responsibility (as defined within the SFIA framework) within their workplace:

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<thead>
<tr>
<th>Level</th>
<th>Levels of Knowledge</th>
<th>Levels of Skill and Responsibility (SFIA)</th>
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<tbody>
<tr>
<td>K7</td>
<td></td>
<td>Set strategy, inspire and mobilise</td>
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<tr>
<td>K6</td>
<td>Evaluate</td>
<td>Initiate and influence</td>
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<td>K5</td>
<td>Synthesise</td>
<td>Ensure and advise</td>
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<td>K4</td>
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<td>K3</td>
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Your Learning Accelerated