



BCS Foundation Certificate in Agile Syllabus

Version 2.0
April 2020

This professional certification is not regulated by the following United Kingdom Regulators - Ofqual, Qualification in Wales, CCEA or SQA

Change History

Any changes made to the syllabus shall be clearly documented with a change history log. This shall include the latest version number, date of the amendment and changes made. The purpose is to identify quickly what changes have been made.

Version Number	Changes Made
Version 2.0 April 2020	Syllabus Finalised
Version 2.0 March 2020	Draft 2 Syllabus continuing (Part 2)
Version 2.0 December 2019	Draft 2 Syllabus started (Part 1)
Version 1.6 December 2016	Strapline regarding regulated statement has been added
Version 1.5 March 2015	Updated language requirements for extra time and use of dictionaries. Standardised the trainer requirements.
Version 1.4 October 2013	Updated trainer requirements to include minimum experience.
Version 1.3 September 2013	Amended syllabus based on pilot phase feedback
Version 1.2 September 2013	Trainer pass rate added.
Version 1.1 August 2013	Name updated to Foundation Certificate in Agile. Trainer pass rate added.
Version 1.0 June 2013	Syllabus created

BCS Foundation Certificate in Agile

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Introduction

This foundation certificate provides a holistic appreciation of Agile. Candidates will be equipped with the core foundations that underpin the Agile mindset and Agile approaches to delivery. This certification will equip candidates with knowledge that can be applied in a variety of situations and promotes effective working with any Agile team. It does not focus solely on one specific methodology.

Target Audience

The BCS Foundation Certificate in Agile is relevant to anyone requiring an understanding of the use of Agile or looking to adopt it. This includes, but is not limited to, organisational leaders and managers, Marketing executives and managers, and/or all professionals working in an Agile environment, including Software Testers, Developers, Business Analysts, UX Designers, Project Management Office (PMO), Project Support and Project Coordinators.

Levels of Knowledge / SFIA Levels

This syllabus will provide candidates with the levels of difficulty / knowledge 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 further explained on the website www.bcs.org/levels.

Level	Levels of Knowledge	Levels of Skill and Responsibility (SFIA)
K7		Set strategy, inspire and mobilise
K6	Evaluate	Initiate and influence
K5	Synthesise	Ensure and advise
K4	Analyse	Enable
K3	Apply	Apply
K2	Understand	Assist
K1	Remember	Follow

Learning Outcomes

Candidate will be able to demonstrate knowledge and understanding of the following aspects of Agile:

1. Why Agile? The factors that drive Agile adoption
2. The Agile Manifesto in detail
3. The Agile Mindset
4. Roles in Agile Teams
5. Common Agile Practices
6. The practical application of Agile

Study Format and Duration

Candidates can study for this certificate in two ways:

- Attending an accredited training course. This will require a minimum of 18 hours of study over a minimum of three days.
- Self-study. Self-study resources include online learning and recommended reading (see syllabus Reading List).

Eligibility for the Examination

There are no specific pre-requisites for entry to the examination although accredited training is strongly recommended.

Examination Format and Duration

Type	40 Multiple Choice questions
Duration	60 minutes
Supervised	Yes
Open Book	No (no materials can be taken into the examination room)
Passmark	26/40 (65%)
Delivery	Digital or paper based.

Additional time

For Candidates Requiring Reasonable Adjustments Due to a Disability.

Please refer to the [reasonable adjustments policy](#) for detailed information on how and when to apply.

For Candidates Whose Language is Not the Language of the Examination

If the examination is taken in a language that is not the candidate's native/official language, then they are entitled to:

- 25% extra time.
- Use their own paper language dictionary (whose purpose is translation between the examination language and another national language) during the examination. Electronic versions of dictionaries will not be allowed into the examination room.

Guidelines for Accredited Training Organisations

Each major subject heading in this syllabus is assigned a percentage weighting. The purpose of this is:

- 1) Guidance on the proportion of content allocated to each topic area of an accredited course.
- 2) Guidance on the proportion of questions in the exam.

Courses do not have to follow the same order as the syllabus and additional exercises may be included, if they add value to the training course.

Question Weighting

Syllabus Area	Syllabus Weighting	Number of questions per exam
1. Why Agile?	7.5	3
2. Individuals and their Interactions over Processes and Tools	7.5	3
3. Working Software over Comprehensive Documentation	7.5	3
4. Customer Collaboration over Contract Negotiation	7.5	3
5. Responding to Change over following a plan	10	4
6. The Agile Mindset	25	10
7. Roles in Agile Teams	5	2
8. Common Agile Practices	20	8
9. Agile in Practice	10	4
Total	100%	40 Questions

Trainer Criteria

Criteria	<ul style="list-style-type: none">• Hold the Foundation Certificate in Agile• Have 10 days training experience or a train the trainer qualification.• Have a minimum of 2 years practical Agile experience.
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Classroom Size

Recommended maximum trainer to candidate ratio	1:16
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Excerpts from BCS Books

Accredited Training Organisations may include excerpts from BCS books in the course materials. If you wish to use excerpts from the books you will need a license from BCS to do this. If you are interested in taking out a licence to use BCS published material you should contact the Head of Publishing at BCS outlining the material you wish to copy and the use to which it will be put.

Syllabus

Learning Objectives

1. Why Agile? (7.5%)

Candidates will be able to:

- 1.1 Describe a linear development approach, such as Waterfall and V-model
- 1.2 Explain why linear development approaches are not suitable in a Volatile, Uncertain, Complex and Ambiguous (VUCA) environment
- 1.3 Explain the origins of Agile
- 1.4 Recognise the Agile Manifesto and its principles
- 1.5 Explain how the Pillars of Scrum underpin Agile thinking

2. Individuals and their Interactions over Processes and Tools (7.5%)

Candidates will be able to:

- 2.1 Describe ways that the processes and tools can undermine Agile team performance
- 2.2 Explain the connection between team motivation and self-organising autonomous teams
- 2.3 Recall how Agile teams interact

3 Working Software over Comprehensive Documentation (7.5%)

Candidates will be able to:

- 3.1 Describe how working software means more than just code
- 3.2 Explain that Agile can be applied to non-software products
- 3.3 Explain how the Seven Wastes of Lean (Software Development) relates to comprehensive documentation *(As defined in: Lean Software Development: An Agile Toolkit and widely referenced elsewhere)*

4 Customer Collaboration over Contract Negotiation (7.5%)

Candidates will be able to:

- 4.1** Describe the Agile team's relationship with its customers
- 4.2** Describe how Agile teams use time boxes and iterations to decide what work to commit to
- 4.3** Describe the Product Owner role and their responsibilities

5 Responding to Change over following a plan (10%)

Candidates will be able to:

- 5.1** Explain how regular feedback helps Agile teams respond to change
- 5.2** Describe how Agile teams recognise when change is underway
- 5.3** Describe the different levels of planning that Agile teams use
- 5.4** Explain the risks of detailed upfront planning

6 The Agile Mindset (25%)

Candidates will be able to:

- 6.1** Explain Servant Leadership
- 6.2** Explain how Agile teams are cross-functional and self-organising
- 6.3** Explain how the Pillars of Scrum enable continuous improvement
- 6.4** Describe how Agile teams demonstrate transparency
- 6.5** Explain the importance of maximising the amount of work not done
- 6.6** Describe how Agile teams maintain sustainable pace
- 6.7** Recall that autonomy, mastery and purpose are critical factors in creating motivated teams
- 6.8** Explain the importance of Psychological Safety for high performing teams
- 6.9** Explain incremental and iterative delivery

7 Roles in Agile Teams (5%)

Candidates will be able to:

7.1 Describe the three Scrum roles

7.2 Identify and describe commonly used non-Scrum Agile roles

8 Common Agile Practices (20%)

Candidates will be able to describe the following practices:

8.1 Team Leadership and Organisation

- 8.1.1 Iterations and Timeboxing
- 8.1.2 Daily stand-up meetings
- 8.1.3 Agile board
- 8.1.4 Iteration planning
- 8.1.5 Iteration review
- 8.1.6 Retrospective
- 8.1.7 Agile coaching
- 8.1.8 Backlog refinement
- 8.1.9 Limiting work in progress (WIP)

8.2 Requirements

- 8.2.1 Product roadmaps
- 8.2.2 Backlog
- 8.2.3 User stories
- 8.2.4 Three C's (Card, Conversation, Confirmation)
- 8.2.5 Definitions of Done and Ready

8.3 Estimation

- 8.3.1 Relative sizing
- 8.3.2 The Agile Estimation Game, e.g. Planning Poker™⁽¹⁾
- 8.3.3 Story points
- 8.3.4 Velocity

8.4 Software Development

- 8.4.1 Pair Programming and Mob Programming
- 8.4.2 Test Driven Development (TDD)
- 8.4.3 Behaviour Driven Development (BDD)
- 8.4.4 Refactoring
- 8.4.5 Emergent design
- 8.4.6 Continuous Integration / Continuous Deployment (CI/CD)
- 8.4.7 Automated testing

9 Agile in practice (10%)

Candidates will be able to:

- 9.1** Describe the following Agile approaches
 - 9.1.1 Scrum
 - 9.1.2 Kanban

- 9.2** Explain how the following practices can remove the need to adopt a scaling method such as, Scrum of Scrums, SAFe, LeSS, Scrum@Scale
 - 9.2.1 Refactoring solution architecture
 - 9.2.2 Decoupling team dependencies
 - 9.2.3 Decomposing into independent goals
 - 9.2.4 Shortening cycle time

- 9.3** Explain why the following metrics are indicators to healthy Agile teams
 - 9.3.1 Short lead time from business need to solution deployment
 - 9.3.2 Team is continuously improving
 - 9.3.3 Mean time to restore

Recommended Reading List

Title: The Agile Manifesto and Principles

Author: Various Authors

Publication Date: 2001

URL: <http://Agilemanifesto.org/>

Title: The Scrum Guide

Author: Jeff Sutherland & Ken Schwaber

Publisher: Scrum.org

URL: <http://www.scrum.org/Scrum-Guides>

Title: Agile and Business Analysis

Author: Lynda Girvan and Debra Paul

Publisher: BCS

Publication Date: 2017

ISBN: 978-1-78017-322-1

URL: www.bcs.org/books/agileba

Title: Accelerate

Author: Nicole Forsgren, PhD, Jez Humble and Gene Kim

Publisher: IT Revolution Press

Publication Date: 2018

ISBN: 978-1-94278-833-1

URL: <https://itrevolution.com/book/accelerate/>

Title: Scrum and XP from the Trenches

Author: Henrik Kniberg

Publisher: InfoQ

Publication Date: June 2007

ISBN: 978-1-4303-2264-1

URL: <http://www.infoq.com/minibooks/scrum-xp-from-the-trenches>

Title: RSA ANIMATE: Drive: The surprising truth about what motivates us

URL: <https://www.youtube.com/watch?v=u6XAPnuFjJc>

Context: Factors that lead to motivated teams, Autonomy, Mastery and Purpose.

Title: Inno-Versity Presents: "Greatness" by David Marquet

URL: https://www.youtube.com/watch?v=OqmdLcyES_Q

Context: Servant leadership and Empowerment

Title: State of Agile

URL: <https://www.stateofagile.com>

Additional Reading List

Title: Extreme Programming Explained: Embrace Change (2nd Edition)

Author: Kent Beck / Cynthia Andres

Publisher: Addison Wesley

Publication Date: Nov 2004

ISBN: 978-0321278654

Title: Lean Software Development: An Agile Toolkit

Author: Mary Poppendieck, Tom Poppendieck

Publisher: Addison Wesley

Publication Date: May 2003

ISBN: 0321150783

Title: Essential Kanban Condensed

Author: David J Anderson

Publication Date: May 2016

ISBN: 0984521429

Title: Succeeding with Agile

Author: Mike Cohn

Publisher: Addison Wesley

Publication Date: November 2009

ISBN: 0321579364

Title: Agile Testing Condensed: A Brief Introduction

Author: Janet Gregory and Lisa Crispin

Publisher: Lean Pub

Publication Date: 24 Sept 2019

ISBN: 199922051X

URL: <https://leanpub.com/agiletesting-condensed>

List of Basic Concepts

This chapter contains the terms with which candidates should be familiar.

Please note that knowledge of these terms alone does not suffice for the exam; the candidate must understand the concepts and be able to provide examples.

Agile Board	Information Radiators	Scrum-of-Scrums
Agile Coach	Iteration Planning	Scrum Team Member
Agile Coaching	Iteration Review	Servant Leader
Agile Manifesto	KanBan	Sprint
Agile Teams	Lean Seven Wastes	Sprint Backlog
Automated Testing	Mean Time to Restore	Sprint Planning
Backlog Refinement	Mob Programming	Sprint Retrospective
Backlogs	MoSCoW	Sprint Review
Behaviour Driven Development (BDD)	Pair Programming	Story Points
Continuous Deployment (CD)	PDCA Loop	Sustainable Pace
Continuous Integration (CI)	Planning Poker™ ⁽¹⁾	Test Driven Development (TDD)
Daily Scrum	Product Backlog	Time-box/Time-boxing
Daily Stand-up Meetings	Product Owner	T-Shaped Professional
Definition of Done (Done)	Psychological Safety	User Story
Dev Ops	Refactoring	Velocity
Emergent Design	Relative sizing	V-Model
Estimation	Release Planning	Volatile, Uncertain, Complex and Ambiguous (VUCA)
Extreme Programming (XP)	Retrospectives	Waterfall
Generalising Specialist	Scrum	
Increment	Scrum Master	

References

(1) **Mountain Goat Software.**

<https://www.mountaingoatsoftware.com/agile/planning-poker>