Preparation Guide

Edition 202603

Content

1. Overview

EXIN BCS Requirements Engineering (RQE.EN)

Scope

The EXIN BCS Requirements Engineering certification confirms that the professional can elicit, analyze, and manage requirements to ensure that requirements align with business objectives.

Upon completion of the certification, candidates will be able to demonstrate a practical understanding of how to:

- collaborate with stakeholders to ensure requirements align with business objectives.
- elicit different types of requirements and the associated documentation.
- analyze and validate requirements.
- ensure and manage requirement quality and change.

Summary

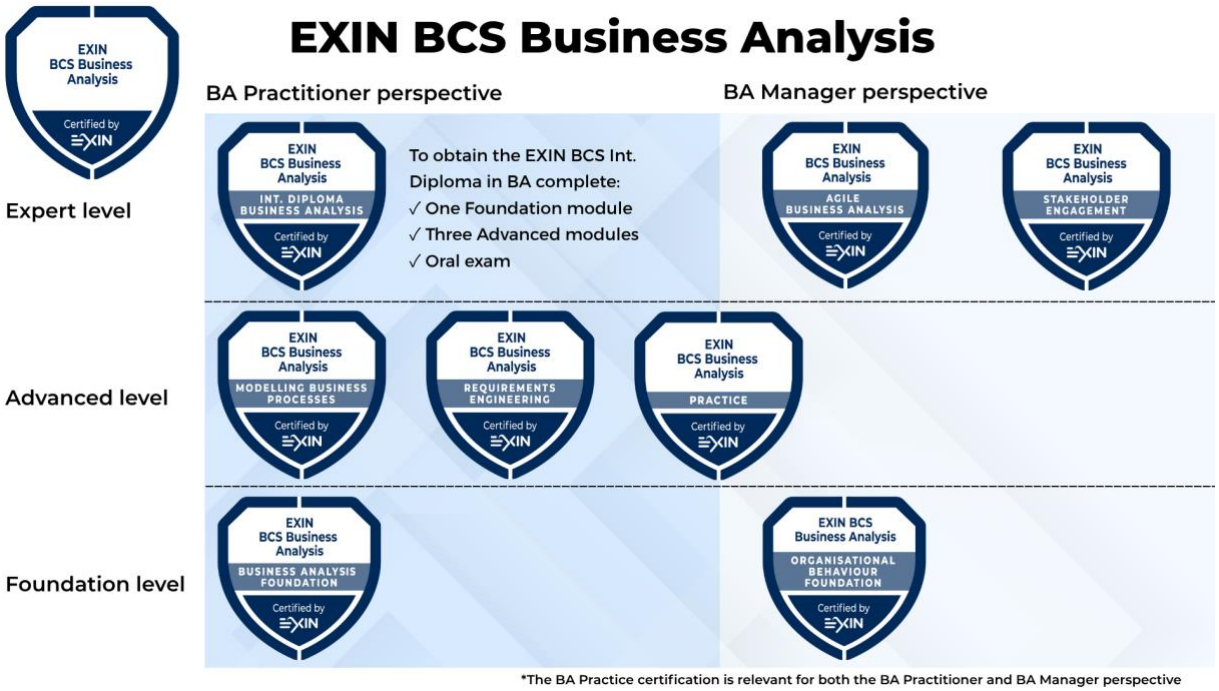
The EXIN BCS Requirements Engineering certification is for candidates who want to develop or further their skills in the understanding and application of elicitation, analysis and management of requirements.

As the traditional Business Analyst (BA) role develops and grows into other areas, the need for Requirements Engineering (RE) skills has opened up into the wider business and is now necessary in a variety of roles and teams.

The learning in this certificate is shaped to place emphasis on valuable business analysis skills rather than the BA role. Focusing on these skills should ensure alignment with business objectives and a fit-for-purpose solution.

Context

The EXIN BCS Requirements Engineering certification is part of the EXIN BCS Business Analysis qualification program.



Target group

This qualification has been designed to provide valuable learning for those in roles such as Business Analyst, Business Architect, Business Systems Analyst, Data Analyst, Enterprise Analyst, Management Consultant, Process Analyst, product manager, Product Owner, Project Manager, and Systems Analyst.

This certification provides value for candidates in entry-level, associate and management level roles.

Requirements for certification

- Successful completion of the EXIN BCS Requirements Engineering exam.

Examination details

Examination type:	Multiple-choice questions
Number of questions:	40
Pass mark:	65% (26/40 questions)
Open book:	No
Notes:	No
Electronic equipment/aides permitted:	No
Exam duration:	60 minutes

The Rules and Regulations for EXIN's examinations apply to this exam.

Bloom level

The EXIN BCS Requirements Engineering certification tests candidates at Bloom levels 3 and 4 according to Bloom's revised taxonomy:

- Bloom level 3: Application – shows that candidates have the ability to make use of information in a context different from the one in which it was learned. This type of questions aims to demonstrate that the candidate is able to solve problems in new situations by applying acquired knowledge, facts, techniques and rules in a different, or new way. These questions usually contain a short scenario.
- Bloom level 4: Analysis – shows that candidates have the ability to break learned information down into its parts to understand it. This Bloom level is mainly tested in the Practical Assignments. The Practical Assignments aim to demonstrate that the candidate is able to examine and break information into parts by identifying motives or causes, make inferences and find evidence to support generalizations.

Training

Contact hours

The recommended number of contact hours for this training course is 18. This includes group assignments, exam preparation and short breaks. This number of hours does not include lunch breaks, homework and the exam.

Indication study effort

84 hours (3 ECTS), depending on existing knowledge.

Training organization

You can find a list of our Accredited Training Organizations at www.exin.com.

2. Exam requirements

The exam requirements are specified in the exam specifications. The following table lists the topics of the module (exam requirements) and the subtopics (exam specifications).

Exam requirements	Exam specifications	Weight
1. Requirements definition as a service		**5%**
	1.1 Describe the elements that form the requirements definition service.	
	1.2 Describe stages of the Requirements Engineering (RE) Framework and how to plan the approach.	
2. Eliciting requirements		**20%**
	2.1 Explain the relevant strengths and limitations of elicitation techniques in terms of stakeholder knowledge types and behaviors.	
	2.2 Explain the use of prototyping to elaborate requirements.	
	2.3 Analyze a given scenario and apply appropriate elicitation techniques.	
3. Documenting requirements		**25%**
	3.1 Describe the different requirement types.	
	3.2 Explain how requirements are documented and apply best practice to authoring and capturing requirements.	
4. Analyzing requirements		**25%**
	4.1 Explain the purpose of analyzing requirements.	
	4.2 Analyzing requirements - refine a set of requirements.	
	4.3 Analyzing requirements - refine an individual requirement.	
	4.4 Explain additional methods used to analyze and organize requirements.	
5. Validating requirements		**10%**
	5.1 Explain the purpose of validating requirements.	
	5.2 Explain the roles and responsibilities of stakeholders during requirements validation.	
	5.3 Explain different approaches to requirements validation.	
6. Managing requirements		**15%**
	6.1 Explain the rationale of requirements management, and the elements of requirements management.	
	6.2 Managing changes to requirements.	
	Total	**100%**

Exam specifications

1 Requirements definition as a service

The candidate can…

1.1 Describe the elements that form the requirements definition service.

Indicative content

a. Service description
b. Service value proposition
c. Service activities
d. Service techniques

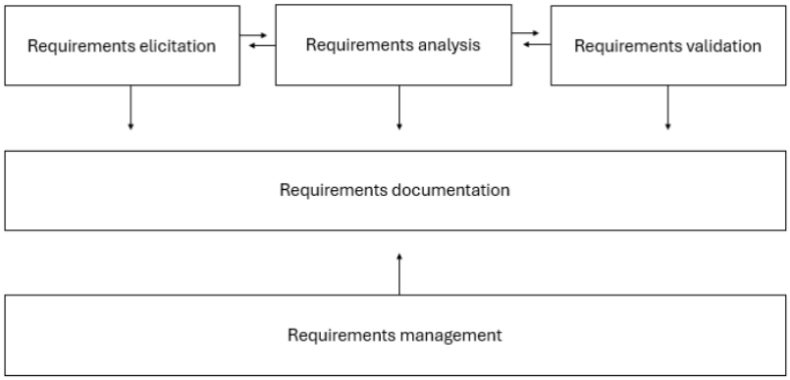
Guidance

Candidates will be tested on their ability to describe what a requirement is, and the requirements definition service, including its Value Proposition, Activities and Techniques, as per the Business Analysis Service Framework (BASF).

1.2 Describe stages of the Requirements Engineering (RE) Framework and how to plan the approach.

Indicative content

a.



b. Planning the requirements approach

Describe how each of the following have an impact planning an RE approach:

- Project approach
- Organizational standards in place
- Stakeholders involved
- Techniques to be used
- Requirement documentation to be produced

Guidance

Candidates will be tested on their ability to describe every stage of the RE Framework -Elicitation, Analysis, Documentation, Validation and Management - and the types of activities that the Business Analyst (BA) undertakes at each stage.

Candidates will also be tested on their ability to describe the considerations that should be made when planning for a RE activity .

A BA should be able to use the RE Framework in a project from start to finish. However, it is common for BAs to be brought in part way through a project. Therefore, it is important that BAs are able to quickly understand ongoing projects and act accordingly.

Candidates will be tested on their ability to analyze a given scenario and explain which stage of the RE Framework is applicable and provide appropriate responses and actions to the scenario.

2 Eliciting requirements

The candidate can…

2.1 Explain the relevant strengths and limitations of elicitation techniques in terms of stakeholder knowledge types and behaviors.

Indicative content

a. Workshops (including techniques that can be used during a workshop)
b. Interviews (including questioning techniques that can be used during an interview)
c. Document analysis
d. Scenario's
e. Storytelling
f. Prototypes (low and high fidelity)
g. Observation
h. User role analysis

Guidance

Elicitation is concerned with purposefully extracting requirements from stakeholders.

To successfully elicit requirements, Business Analysts (BA) will need to apply a combination of elicitation techniques to ensure the appropriate volume and depth of information is secured for analysis. Understanding knowledge types (tacit and explicit) is integral to the requirements elicitation approach.

Candidates will be tested on their ability to explain how the different methods of elicitation are executed, how the method supports the extraction of the different types of knowledge and what potential outcomes can be expected when the elicitation technique is applied.

2.2 Explain the use of prototyping to elaborate requirements.

Indicative content

a. Selecting the appropriate type of prototype (low/high fidelity; throwaway or evolutionary)
b. Visualization of requirements
c. Increase stakeholder understanding
d. Managing expectations when using a prototype
e. Extended use of prototypes to support analysis and documentation

Guidance

Prototyping can take many forms such as manual/hand drawn mock-ups, images of screens, genuine software development etc. The useful common feature and purpose of these prototypes is the creation of visual or physical example, with which stakeholders can interact and provide feedback on.

Candidates will be tested on their ability to explain which type of prototype might be appropriate for a given scenario, how they might use it and what outcomes they should anticipate.

2.3 Analyze a given scenario and apply appropriate elicitation techniques.

Indicative content

a. How to select an appropriate elicitation technique
b. Plan/prepare for its use
c. Explain execution of technique
d. Describe the anticipated outcome/output

Guidance

Candidates will be tested on their ability to analyze a given scenario and apply appropriate elicitation techniques.

3 Documenting requirements

The candidate can…

3.1 Describe the different requirement types.

Indicative content

a. Business (general, technical)
b. Solution (functional, non-functional)

Guidance

Each type of requirement focuses on different aspects of the future solution. Therefore, it is important that the candidates can confidently categorize requirements by type.

Candidates will be tested on their ability to describe the different types of requirements. Candidates will also be tested on their ability to review a given requirement and identify the type.

3.2 Explain how requirements are documented and apply best practice to authoring and capturing requirements.

Indicative content

a. Diagrammatic documentation such as data model, function model, UML activity diagram, business process model
b. Text-based documentation, such as requirements catalogue, business requirements documentation (BRD), user story, backlogs
c. Selecting the appropriate style(s) of documentation

Guidance

It is important to clearly define what should be delivered. While there are different approaches to documenting the different aspects of requirements, the main focus is to provide it in an easily accessible format and to select the appropriate documentation for the project approach. Consistency of documentation promotes effective communication between stakeholders and the basis of subsequent analysis and validation.

Candidates will be tested on their ability to explain the different styles of requirements documentation and will also be assessed on their ability to apply best practice to requirements authoring.

4 Analyzing requirements

The candidate can…

4.1 Explain the purpose of analyzing requirements.

Indicative content

a. Issues that contribute to poorly articulated or incomplete expressions of need
b. Tasks undertaken as part of requirements analysis (such as refining, categorising, prioritising and modelling)
c. Goal of analysing requirements

Guidance

When multiple elicitation techniques have been used to extract requirement information, the output can often take multiple forms, contain different levels of detail or understanding. The Business Analyst (BA) must recognise that raw output from the selected elicitation techniques, needs to be analysed both in terms of each individual requirement and as a collective or “set” of requirements.

Candidates will be tested on their ability to explain the types of issues that might be encountered following requirements elicitation and why they may occur. They will also be able to describe how they will assess whether the output from requirements analysis is complete, well organised and appropriately documented.

4.2 Analysing requirements - refine a set of requirements.

Indicative content

Filters:

a. Unravelling multiple requirements
b. Checking for overlapping or duplicate
c. Removing conflicts
d. Evaluating feasibility
e. Confirming relevance of the requirement
f. Checking for solutions
g. Confirming quality of expression

Guidance

Once requirements have been elicited and captured initially in some form of documentation, it is important to conduct requirement analysis to ensure that each requirement is distinct and belongs as part of the set. Analysis filters are criteria used to analyse and refine requirements. They help to identify ambiguities and inconsistencies.

Candidates will be tested on their ability to describe a technique to refine a set of requirements, for a given scenario. They will be able to identify the issues they have encountered within the scenario and the techniques that would be appropriate to resolve them.

4.3 Analysing requirements - refine an individual requirement.

Indicative content

a. INVEST
b. Quality criteria:

- Clear
- Concise
- Relevant
- Unambiguous
- Correct
- Testable
- Traceable

Guidance

In addition to being part of a well-formed set of requirements, each individual requirement should meet a clearly defined set of criteria to be considered well-formed, clear and complete.

Candidates will be tested on their ability to define a requirement statement for a given scenario, ensuring it meets the quality characteristics or explaining why it does not.

4.4 Explain additional methods used to analyse and organise requirements.

Indicative content

a. Slicing/splitting requirements
b. Analysing Business Rules
c. Categorising requirements
d. Requirements Hierarchy
e. Prioritising requirements (including MoSCoW, Priority Levels, Kano, WSJF, AHP)
f. Modelling to analyse requirements (such as CRUD matrix, data models (UML class models), function models, UML activity diagram, business process models, customer journey mapping)

Guidance
These additional requirements analysis techniques support the Business Analyst (BA) in ensuring the requirements they produce are well formed, within the agreed scope and boundary of the project, appropriately presented and truly represent the needs of the business.

Candidates will be tested on their ability to explain the different methods. They will need to be able to explain the purpose of each type of analysis and what would be achieved by applying it. The candidate will also be tested to their ability to explain why and how requirements should be organised in readiness for requirements validation.

5 Validating requirements

The candidate can…

5.1 Explain the purpose of validating requirements.

Indicative content
a. The objective of validating requirements
b. Confirm requirements are accurate
c. Validate that requirements are aligned to business goals, project and business objectives and scope
d. Agree requirements are suitable for solution design and build activities
e. In Linear projects: agree acceptance criteria is clearly defined, understood and agreed as a basis for User Acceptance Testing (UAT)
f. In Agile projects: agree requirements form an appropriate basis for further elaboration

Guidance
Requirements validation involves the review of requirements conducted by a selected group of stakeholders with the aim to agree that the requirements state the features and characteristics fulfilled by the solution.

Candidates will be tested on their ability to explain the purpose of validating requirements, to justify the need for validation, and the consequences if they are not validated.

5.2 Explain the roles and responsibilities of stakeholders during requirements validation.

Indicative content
a. Business Analyst (BA)
b. Business sponsor
c. Business owners
d. SMEs
e. Solutions architect
f. Developers
g. Testers
h. Project office representatives

Guidance
Validation should include people who represent key project or business roles. Each role has a different responsibility when validating the requirements, and each comes with their own perspective. It is important to obtain validation from different perspectives.

Candidates will be tested on their ability to explain the roles and responsibilities of the review group during requirements validation.

5.3 Explain different approaches to requirements validation.

Indicative content

a. Informal review - Agile/Linear
b. Formal review - Agile/Linear
c. Possible outcomes of requirements validation
- Rejected - rework required
- Amendment required
- Agreed - signed off/baselined requirements, backlog established or 'ready' status

d. The two stages of Agile requirements validation

Guidance

The approach to validation may vary depending on the project approach and the availability of stakeholders.

Candidates will be tested on their ability to explain the reasoning for various approaches to requirements validation, and when in the Requirements Engineering (RE) Framework they should occur.

Candidates will also be tested on their ability to describe for a given scenario how a requirement validation review would be planned and executed, along with the action they should take for each possible outcome.

6 Managing requirements

The candidate can…

6.1 Explain the rationale of requirements management, and the elements of requirements management.

Indicative content

a. Rationale for when requirements management occurs in the Requirements Engineering (RE) Framework
b. Elements of requirements management
- Identification
- Cross-referencing
- Origin and ownership
- Software support
- Change control
- Configuration management
- Maintaining traceability
  - Horizontal traceability (backwards from, forwards to)
  - Vertical traceability (trace up, trace down)

Guidance

During the Elicitation, Analysis and Documentation stages of the RE Framework, key information about each requirement is captured. Once the requirement has been agreed, during Validation, that information must be kept up to date, while the solution is being developed. Requirements management ensures this maintenance occurs, providing ongoing traceability which is particularly useful in times of solution negotiation or business change. Good requirements management will allow the Business Analyst (BA) to respond effectively during ongoing project activities.

Candidates will be tested on their ability to explain the purpose and rationale of requirements management and to describe the main elements of requirements management.

6.2 Managing changes to requirements.

Indicative content

a. Change control process
b. Possible outcomes: implement or reject
c. The impact of change to configuration management

Guidance

Change control is a vital element of requirements management, the purpose of which is to create a robust audit trail of any changes made to requirements and ensure that any changes made are impact assessed and justified.

Candidates will be tested on their ability to apply a change control process to a given scenario and explain how the change would impact any artefacts subject to configuration management.

3. Levels of knowledge / SFIA levels

This award provides candidates with the level of knowledge highlighted within the table, enabling candidates to develop the skills to operate successfully at the levels of responsibility indicated.

Level	Levels of knowledge	Levels of skill and responsibility (SFIA)
K7		Set strategy, inspire and mobilize
K6	Evaluate	Initiate and influence
K5	Synthesize	Ensure and advise
K4	Analyze	Enable
K3	Apply	Apply
K2	Understand	Assist
K1	Remember	Follow

SFIA plus

This syllabus has been linked to the SFIA knowledge skills and behaviors required at level 4 for an individual working in requirements definition and management.

KSB04	Identifying gaps in the available information required to understand a problem or situation and devising a means of resolving them.
KSB12	Understanding commercial considerations and ensuring alignment with them when making decisions or recommending actions.
KSB22	Establishing relationships, contributing to an open culture, and maintaining contacts with people from a variety of backgrounds and disciplines. Effective, approachable, and sensitive communicator in different communities and cultures. Ability to adapt style and approach to meet the needs of different audiences.
KSC04	Applying techniques which help investigating, analyzing, modelling, and recording a business area or system of interest. Example, but not limited to business environment analysis and process modelling.
KSC09	Using tools (manual or automated) to record the structure, relationships, and use of information within an organization. Examples, but not limited to class diagram and relational data model.
KSC84	Understanding and application of different development approaches e.g., iterative/ incremental methodologies (Agile, XP, TDD, SCRUM) or traditional sequential methodologies (Waterfall or V-Model) and their energy and resource footprints. Irrespective of development methodology a DevOps approach may also be taken where development and operational staff work collaboratively.
KSD04	The selection and application of information elicitation methods, tools and techniques which are appropriate to the information required and the sources available.

Further detail around the SFIA Levels can be found at https://www.bcs.org/it-careers/sfiaplus-it-skills-framework/

4. e-CF Mapping

All e-Competence framework competences related to the EXIN BCS Requirements Engineering certification can be found below. Also indicated is the level of the competence and whether the competence is covered entirely, partially or superficially. For more information about the e-CF, please visit https://itprofessionalism.org/ or contact EXIN. The mapping of this exam against the e-Competence framework.

competence is covered partial coverage superficial coverage

e-Competence Level		1	2	3	4	5
A.4.	Product / Service Planning					
A.10.	User Experience					
D.11.	Needs Identification					
E.2.	Project and Portfolio Management					
E.4.	Relationship Management					

5. Literature

Exam literature

The knowledge required for the exam is covered in the following literature:

A. Debra Paul and James Cadle
Business Analysis
BCS (4th edition, July 2020)
ISBN: 978-1-78017-510-2
https://shop.bcs.org/store/221/detail/workgroup?id=3-221-9781780175102

B. Lynda Girvan, Debra Paul
Agile and Business Analysis
BCS (2nd edition, March 2024)
ISBN: 978-1-78017-619-2

Additional literature

C. James Cadle, Debra Paul Jonathan Hunsley, Adrian Reed, David Beckham and Paul Turner
Business Analysis Techniques: 123 Essential Tools for Success
BCS (September 2021)
ISBN: 978-1-78017-569-0

Comment

Additional literature is for reference and depth of knowledge only.

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