

BUSINESS CASE AND COURSE SYLLABUS: BCS REQUIREMENTS ENGINEERING





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Need to know

Course name:

BCS Requirements Engineering

Course price:

£995+VAT weekday virtual, £1195+VAT weekday classroom, £1395+VAT weekend virtual

Course duration:

3 days midweek, 2 days weekend

Course dates:

Click here to see upcoming dates for this course

Payment options:

Payment is taken via our website by card or bank transfer. Other payment options can be discussed.



Key skills learned:

- The ability to recognise the nature of the requirements and the knowledge type to which they belong.
- Become familiar with a range of elicitation techniques and know how to apply them effectively.
- How to record and prioritise requirements, and be able to recognise and help resolve conflicting requirements.
- Link project objectives/requirements to the business case.

The impact this will have on learners

The BCS Requirements Engineering course will enable learners to act as an effective member of a team involved in eliciting and recording user requirements for an information system.

The confidence boost that formal training can bring will also mean better employee output because they will need less direction and support to achieve success in their role.



The positive impact this will have on your business

- Problems with a project being addressed before they even arise
- Less scheduling and planning conflicts across project requirements
- Higher productivity
- Increased efficiency
- Less reliance on senior team members
- More company loyalty

Benefits at a glance of training with Metadata Training:

- Flexible training to fit any schedule
- Mid week or weekend courses
- Small class sizes for maximum learning experience
- Exam price included in the course price
- Take the exam when suits the learner best
- 5* support

Success stories

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Syllabus overview



1. Define Requirements Approach And Project Scope (5%)



2. Elicit Requirements (15%)



3. Record Requirements (Documentation) (10%)



4. Build Models And Prototypes To Represent The Requirements (20%)



5. Communicate With Stakeholders To Clarify Requirements (7.5%)



 Analyse, Prioritise & Assure The Quality Of Requirements (20%)



7. Conduct User Analysis And Profiling (7.5%)



8. Requirements Management And Traceability (15%)



Full syllabus

1. Define Requirements Approach and Project Scope (5%)

Candidates will be able to:

1.1 Define the term "Requirements".

a. "A feature which business staff need a system (business or IT) to provide."

1.2 Describe the Requirements Engineering Framework.



1.3 Explain factors to be considered in adapting the approach to requirements engineering.

a. Organisational standards.

- b. Project approach.
- c. Types of requirement.
- d. Nature of the solution.

1.4 Describe the contents of a project initiation document (PID)/terms of reference (ToR)

a. OSCAR (Objectives, Scope, Constraints, Authority, Resources) b. Rationale for aligning requirements with a business case and the objectives of the organisation.





2. Elicit Requirements (15%)

Candidates will be able to:

- 2.1 Explain different knowledge types
 - a. Tacit/non-tacit (explicit).
 - b. Individual/Corporate.
- **2.2** Identify a technique to articulate tacit knowledge.
 - a. Observe: observation, shadowing.
 - b. Recount: storytelling, scenario analysis.
 - c. Enact: prototyping, scenario role-play.

2.3 Explain the use, advantages and disadvantages of the following elicitation techniques:

- a. Interviews.
- b. Workshops.
- c. Observation.
- d. Shadowing.
- e. Story-telling.
- f. Scenario analysis.
- g. Scenario role-play.
- h. Prototyping.
- i. Document analysis.

2.4 Identify an appropriate technique to elicit requirements.

- a. Project approach.
- b. Resources (time,
- documentation, technology).
- c. Stakeholder expertise.

2.5 Explain the suitability of elicitation techniques for Agile and linear development approaches.

- a. Iterative development.
- b. Linear development.



3. Record Requirements (Documentation) (10%)

Candidates will be able to:

3.1 Identify and describe the categories of requirement.

a. Business:

General requirements.

Technical requirements.

b. Solution:

Functional requirements.

Non-functional requirements.

3.2 Explain the importance of documentation

- a. Ensures consistency.
- b. Enables communication.
- c. Provides a basis for validation.
- d. Supports product development.
- 3.3 Identify the key documentation styles
 - a. Text based.
 - b. Diagrammatic.

3.4 Explain the characteristics documented for requirements in a requirements catalogue.

- a. Source.
- b. Owner.
- c. Name.
- d. Business Area.

3.5 Explain the key underlying principles and standard format of a user story

- a. Who? What? Why?
- b. "As a {user role} I want {feature} so that I can {reason}.



4. Build Models and Prototypes to Represent the Requirements (20%)

Candidates will be able to:

4.1 Explain the rationale for modelling the functional requirements (processing and data) of an information system.

- a. Conceptualises the solution in its entirety.
- b. Helps to confirm requirements are in scope.
- c. Provides clarity

4.2 Describe the purpose of modelling in requirements engineering.

a. Generate questions in order to clarify a requirement and remove ambiguity.

- b. Define business rules.
- c. Cross-check requirements for consistency and completeness.

4.3 Prepare a UML use case diagram

- a. Elements required to create a case diagram:
 - Actors.
 - Use Cases.
 - System Boundary.
 - Associations.

4.4 Prepare a UML Class diagram

a. Elements used to create a class diagram that represent the data requirements:

- Classes.
- Attributes.
- Associations.
- Multiplicities.

b. Describe the business rules that are represented.





4.5 Explain the use of a CRUD matrix

- a. Create, Read, Update, Delete.
- b. Comparing a Function or Event against data.
- c. Benefits to be derived from cross-referencing models.

4.6 Explain the use of prototyping to elaborate requirements

- a. Visualisation of requirements.
- b. Increase stakeholder understanding.
- c. Analysis and confirmation of requirements.

5. Collaborate and Communicate with Stakeholders to Clarify Requirements (7.5%)

Candidates will be able to:

5.1 Describe the responsibilities of the actors (stakeholder roles) in Requirements Engineering.

a. Actors – "Usually user roles [that] show the individual or group of individuals responsible for carrying out the work or interacting with a system. An actor may also be an IT system or time."

b. Stakeholders – "An individual, group of individuals or organisation with an interest in the change."

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5.2 Describe the purpose of requirements validation.

- a. Validation process.
- b. Review and agree requirements.

5.3 Describe the rationale for various approaches to requirements validation.

- a. Informal review.
- b. Formal review.



5.4 Demonstrate how Agile requirements are validated.

- a. Initiating the backlog.
- b. Maintaining the backlog.
- c. Prioritisation.
- d. Defining acceptance criteria.

5.5 Demonstrate how formal requirements are validated.

- a. Business Requirements Document (BRD).
- b. Review Group.

6. Analyse, Prioritise and Assure the Quality of Requirements (20%)

Candidates will be able to:

6.1 Explain the purpose of analysing requirements.

- a. Ensure they are developed clearly.
- b. Well organised.
- c. Appropriately documented.

6.2 Apply the MoSCoW technique to prioritise requirements

a. Must have, Should have, Could have, Want to have (but won't have this time).

6.3 Interpret individual requirements; applying filters and quality criteria.

- a. INVEST.
- b. Quality Criteria including; clear, concise, consistent, relevant.

c. Filters including; checking for duplication, unravelling multiple requirements, evaluating feasibility.



6.4 Identify the purposes of Slicing Requirements (Agile/Linear).

- a. Allowing work to commence and/or progress.
- b. Elaborating only as required.
- c. Incremental development.
- d. Linear development.

6.5 Identify techniques used to analyse Business Rules.

- a. Constraints:
 - Action governance.
 - Data constraints.
- b. Operational Guidance:
 - Decision conditions.
 - Calculations.
- c. Data models.
- d. CRUD matrices.
- e. Activity diagrams.
- f. Business process models.

6.6 Explain the importance of testability.

- a. "Has the requirement been delivered as intended?".
- b. Functional requirements and related non-functional requirements.

7. Conduct User analysis and Profiling (7.5%)

Candidates will be able to:

- 7.1 Describe techniques used to analyse roles.
 - a. User role analysis.
 - b. Personas.
- **7.2** Explain the purpose of a Customer Journey Map.
 - a. How to use a Customer Journey Map.
 - b. Elements to be considered in its creation.

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8. Requirements Management and Traceability (15%)

Candidates will be able to:

8.1 Explain the rationale and the approach to achieving requirements traceability

a. Establish the origin and ownership of each requirement.

- **8.2** Explain the rationale for requirements management
 - a. Business change.
 - b. Traceability.
 - c. Ownership.
 - d. Origins.

8.3 Define the elements of requirements management and the links between them.

- a. Identification.
- b. Cross-referencing.
- c. Origin and ownership.
- d. Software support.
- e. Change control.
- f. Configuration management.
- **8.4** Explain the use of a change control process.
 - a. Document, Analyse, Consult, Decide.
 - b. Implement or reject.

8.5 Describe the elements of a version control process.

- a. Allocate an identifier.
- b. Allocate a version number.
- c. Version number updated to reflect changes.

8.6 Explain the use and advantages of different forms of traceability.

a. Horizontal; forwards and backwards. b. Vertical. **13**



Examination format

This certificate is assessed through completion of an invigilated online exam which candidates will only be able to access at the date and time they are registered to attend.

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

Adjustments and/or additional time can be requested in line with the BCS reasonable adjustments policy for candidates with a disability, or other special considerations including English as a second language.





Got more questions?



info@metadatatraining.co.uk

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Book a call with a course adviser 🏾 🏹

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