

BCS Certificate in Requirements Engineering

Our Requirements Engineering course includes both practical and theoretical elements. Theoretical concepts are introduced and are then reinforced through practical exercises and a running case study where participants can apply the skills and techniques of analysis in a realistic project simulation.

Objective

At the end of this Requirements Engineering training course, participants will be able to:

- Recognise the role of requirements analysis in systems development
- Understand the Requirements Engineering approach
- Describe the technical and interpersonal skills required of an analyst
- Apply a range of requirements elicitation techniques, such as workshops, interviews, scenarios, observation, document analysis, prototyping and questionnaires
- Interpret a model of the system data
- Model requirements using Context and Use Case Diagrams
- Document requirements in a Requirements Catalogue
- Analyse, prioritise and validate requirements
- Understand the principles and techniques required for effective requirements management

Details

Duration: 3 Days

Who is this course for

A great course for IT Service and management professionals looking to expand their knowledge and gain a reputable qualification.

Course Content

Rationale for requirements engineering

- Problems in developing IT systems
- The costs of errors
- Knowledge types – explicit and tacit
- Definition of a 'requirement'
- Hierarchy of requirements
- Characteristics of requirements engineering
- A framework for requirements engineering

The role of the analyst

- Stakeholders in requirements engineering
- Roles and responsibilities
- User analysis

Requirements planning and management

- The importance of planning
- Project initiation and the project initiation document
- Requirements management

Requirements elicitation 1 – interviewing

- Introduction to elicitation techniques
- Interview preparation
- Structure of an interview
- Documenting the interview

Requirements elicitation 2 – workshops

- What is a workshop?
- The benefits – and limitations – of a workshop
- Workshop roles and responsibilities
- Preparing for the workshop
- Techniques to elicit information
- Techniques for documenting workshop results

Requirements elicitation 3 – supplementary techniques

- Observation, ethnographic studies and STROBE
- Quantitative techniques – activity sampling
- Document analysis
- Record searching
- Questionnaires
- Special purpose records

Documenting requirements

- What should be documented?
- Contents of the requirements document
- The requirements catalogue

Requirements analysis 1 – modelling the processes

Requirements analysis 3 – categorisation and organisation

- Organising requirements into a hierarchy
- Categorising requirements – functional, nonfunctional, technical and general
- Structuring the requirements catalogue

Requirements analysis 4 – necessity and feasibility checking

- Checking the relevance of requirements to business goals
- Assessing the feasibility (business, technical, financial) of requirements

Requirements analysis 5 – quality control

- Checking requirements against quality criteria
- Identifying conflicting requirements
- Resolving requirements conflicts – negotiating skills

Requirements analysis 6 – testability of requirements

- Identifying acceptance criteria
- The concept of business tolerances

Scenarios and prototyping

- Purpose and use – for elicitation, clarification and validation
- Developing scenarios
- Diagrammatic approaches to scenario modelling
- Use case descriptions to document scenarios
- Rationale for prototyping
- Throwaway versus evolutionary prototyping
- The prototyping process
- Scope and fidelity of prototypes
- Dangers of prototyping

Requirements management – recap

- Recap on features of requirements management
- Requirements traceability – importance and processes
- Baselining and version control
- The change control process
- Requirements re-use
- Support tools (Computer Aided Software Engineering)
- Requirements patterns

Validating requirements

- The place of validation in the requirements engineering process
- Validation versus verification
- Issues that can arise at validation
- Requirements validation process and the review meeting
- Attributes to be checked by reviewers
- Use of prototyping to validate requirements
- The importance of sign-off

Delivering the requirements

