

Requirements Engineering

Profile

Today's organisations require Business Analysts who can extend themselves beyond their conventional role of merely eliciting requirements. They require people who can undertake the requirements engineering process from elicitation to validation and retain ownership of requirements through implementation and testing.

This course develops the skills needed to work with requirements stakeholders to ensure that the requirements satisfy their various perspectives and that any conflicts are negotiated to a position of consensus. Delegates will also learn how to work with stakeholders and other requirements actors to ensure the requirements are complete, unambiguous, realistic and testable.

At the end of the course delegates may sit an examination to attain the ISEB Business Systems Development certificate in Requirements Engineering.

These delegates should also book on course code REEX-2). This course may be taken as part of the QA-IQ programme leading to the ISEB Diploma in Business Analysis.

This is an intensive three-day course with a combination of lectures, in-class exercises, and case studies.

Those delegates taking the ISEB certificate will need to spend 60-90 minutes each evening on revision and example examination questions.

The recommended combination and sequence of courses for delegates wishing to complete QA-IQ's programme leading to the ISEB Business Analysis Diploma is either (1) The Organisational Context, Business Analysis Essentials, Modelling Business Processes and Requirements Engineering or (2) The Organisational Context, Business Analysis Essentials and Business Systems Analysis using UML.

Course content

The Requirements Engineering Process

Lifecycle for business change; Business plans and objectives; Problems with requirements; The stakeholders involved in RE; RE process overview

Requirements and the Business Context

Hierarchy of requirements; TOR/PID; Functional requirements; Non-Functional requirements; General/Technical requirements; Service level requirements

Eliciting and Documenting Requirements

Problems with elicitation; Different stakeholders viewpoints; Elicitation techniques; Facilitated workshops in detail; Prioritisation of requirements; The structure and contents of a requirement

Interviewing for Requirements

Interviewing for RE; The interviewing lifecycle; Planning, preparing, conducting and following up the interview; Questioning strategies

Use of Models in Requirements Engineering

Developing a process/functional model; Reading a static (data) model

Analysing and Negotiating Requirements

Iterating requirements; Congruence with business objectives; Analysing requirements against: Classification, Priority, Ambiguity, Testability, Risk, Granularity, Omissions, Conflicts, Overlaps, and Achievability; Resolving conflicts

Validating Requirements

Requirements validation; Requirements reviews; Validation checklist; Validation by prototyping

Managing Requirements

The principles of requirements management (RM); How the '4 pillars' support RM; The baseline mechanism; The role of the Change Control Board

Benefits Confirmation

Requirements testing/user acceptance testing; Post-implementation review; Roles of requirements actors

Case Study

A case study allows the delegates to undertake a simulated requirements engineering assignment to practise the new skills.

Prerequisites

- Those wishing to acquire the skill set required for establishing system requirements.
- Those wishing to attain the ISEB Business Systems Development Certificate in Requirements Engineering. (These delegates should also book on course code REEX-2). Candidates with special examination requirements should consult the ISEB web site (www.iseb.org.uk) for the ISEB Special Needs policy. Note that the ISEB must be advised at least four weeks in advance of any special requirements.

- There are no specific pre-requisites for this course.

Skills

- Describe the roles and responsibilities of key stakeholders in the requirements engineering process
- Demonstrate the application of a range requirements elicitation techniques
- Explain the use of requirements elicitation techniques and the relevance of the techniques to given situations
- Document and prioritise user requirements for an information system
- Identify problems with requirements and explain how requirements documentation may be improved
- Create a process/function model of requirements for an information system
- Interpret a model of the data requirements for an information system
- Explain the importance of linking project objectives and requirements to the Business Case
- Describe the principles of Requirements Management and explain the importance of managing requirements
- Describe the use of CASE tools to support Requirements Engineering
- Explain the principles of Requirements Validation and define an approach to validating requirements