

learning
equals
development

EQV Course Outline



- Systems Analysis and Specification with UML
- 5 Day

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Systems Analysis and Specification with UML (5 Day)

Business Benefit

This course provides participants with the skills they need to become effective systems analysts. The programme covers a number of the key systems development lifecycles plus a broad range of systems analysis techniques. These include both techniques for requirements elicitation – such as interviewing, workshops, scenario modelling and prototyping – as well as modelling approaches such as use case and class modelling. During the course, participants gain practical experience through applying the techniques to a variety of realistic case study exercises.

The course is delivered by trainers who have a wealth of systems analysis and modelling experience and some are published authors on these topics. A comprehensive reference manual, containing detailed guidance on the use of systems analysis techniques and providing references for further study, is supplied as part of the course materials.

ISEB certificates

This course prepares candidates to sit two ISEB examinations, both core modules in the ISEB Systems Development Diploma. One of these is for the ISEB Certificate in Systems Development Essentials and the other is for the ISEB Certificate in Systems Modelling Techniques. Gaining each of these certificates involves a one-hour, open book, scenario-based examination.

Course Content

Roles in systems development

- The purpose, objectives and tasks involved in systems development
- Roles and actors in the systems development process
- Technical and interpersonal skills of systems analysts
- The emergence of skills frameworks (SFIA+)
- The Capability Maturity Model Integration (CMMI)

Systems architecture

- Enterprise, systems and infrastructure levels of architecture
- The Zachman Framework
- Inputs at an enterprise level (EAP)
- Inputs at system and infrastructure levels
- Components of an EAP methodology

Development approaches

- Bespoke software development
- Commercial Off-The-Shelf (COTS) software package solutions
- Configuring and customising COTS solutions
- Component-based systems development
- Service-based systems development

Course Content

Systems development lifecycles

- Waterfall model
- V model
- Incremental model
- Spiral (iterative) models
- Advantages and disadvantages of each approach
- Selecting an appropriate approach

Systems development methods

- Traditional and structured approaches
- Agile development / rapid application development / eXtreme Programming
- The Unified Process (UP) and the Unified Modeling Language (UML)

Systems investigation and requirements

- Fact-finding approaches:
 - Workshops
 - Prototyping
 - Interviewing
 - Questionnaires
 - Scenario analysis
 - Other approaches
- Functional requirements definition
- Non-functional requirements definition
- Documenting requirements
- Human aspects of systems investigation and the management of change

Systems modelling – overview

- The need for models and modelling
- Models from the Unified Modeling Language (UML)
- Interaction of selected UML models
- Validating and verifying models

Use case modelling

- Use case diagrams – concepts and notation
- The <<include>> and <<extend>> constructs
- Use case descriptions

Class modelling

- Objects and classes
- Classes and attributes
- Abstraction and encapsulation
- Associations
- Generalisation and inheritance

Course Content

Interaction diagrams

- Sequence diagrams
- Classes and operations
- Polymorphism

Activity diagrams

- Users and task analysis
- Activity diagrams
- Modelling the user interface
- State machine diagrams

Systems design, implementation and maintenance

- Aspects of the production environment
- Design principles and constraints (legal, ethical, financial)
- The tasks of implementation
- Sign-off and handover
- Post-implementation reviews
- Different types of maintenance

Quality assurance

- Definitions of software quality
- The V model
- Requirements-driven testing
- Static testing: types of walkthrough and inspection
- Post-project reviews
- Service level agreements

CASE and CAST tools

- Features of computer-aided software engineering (CASE) and of computer-aided software testing (CAST) tools
- Life-cycle coverage
- Requirements traceability
- Advantages and disadvantages of CASE and CAST tools

The EQV Promise

We ensure that our courses are well received and are delivered by trainers that have actual commercial competency in their chosen subject.

Not only is this essential for our accreditation purposes but it ensures that the trainers will be able to include relevant experiences they themselves have learnt from. This generates appropriate engagement and empathy in the training environment.

When the course is completed we will report back to you about how the training has been received and can indeed evaluate the training right from start to finish after the skills transfer period. This information can come from your account manager who is your main point of contact at all times.

The EQV Experience

Our training courses take the attendee on a journey of learning and development. Throughout the course everyone is engaged in a stimulating and participative way.

Our courses are designed to encompass many different kind of learning activities making sure they appeal to different natural styles of learning that individuals have.

Activities may include a selection of syndicate work, discussion, pair work, case studies, games, role play, quizzes and presentations.

During the event an individual works on their own implementation plan so that they have a clear plan of how they are going to support their own skills transfer back in the workplace. Whilst it is important for the attendees to enjoy the workshop we want to ensure they apply as much as possible back in the workplace.

Our Training Centre

Set in the heart of beautiful rolling Leicestershire countryside, our idyllic training facilities not only provide attendees with the perfect environment to concentrate on their individual learning experience but also provide the practicality of ample parking and fully designed and equipped training rooms.

You will be greeted upon arrival by our training co-ordinator who is your point of contact throughout the day should have any specific queries.

A delicious buffet lunch is provided catering for a variety of dietary needs.

