Course Overview:

The ISTQB is the International Software Testing Qualification Board, represented in over 43 countries to ensure consistent standards for software testing qualifications internationally. Gaining ISTQB certification at different levels means that a tester's competency and skills are internationally recognised and acknowledged.

Course Objectives:

- Describe why testing is part of quality assurance and give examples of how testing contributes to higher quality (K2)
- Provide examples of the objectives of testing in different phases of the software life cycle (K2)
- Explain the seven principles in testing
- Recognise the fact that software development models must be adapted to the context of project and product characteristics (K1)
- Identify and describe non-functional test types based on non-functional requirements (K2)
- Explain the differences between static and dynamic techniques, considering objectives, types of defects to be identified, and the role of these techniques within the software life cycle (K2)
- Explain the differences between different types of reviews: informal review, technical review, walkthrough and inspection (K2)
- Translate test cases into a well structured test procedure specification at a level of detail relevant to the knowledge of the testers (K3)
- Write test cases from given software models using equivalence class partitioning, boundary value analysis, decision tables and state transition diagrams/tables (K3)
- Explain the purpose of tool support for testing (K2)
- Summarise the potential benefits and risks of test automation for testing (K2)
- The ISTQB CTFL syllabus requires different learning objectives/cognitive levels of knowledge:
- K1: Remember, recall (e.g. recognise a definition)
- K2: Understand, give reasons for (e.g. why should testing start early in the lifecycle)
- K3: Apply, do, perform (e.g. apply boundary value analysis technique to identify valid boundaries)
- K4: Analyse, solve a problem or task (e.g. analyse a document or code)

Course Content – ISTQB

Day 1:

- Fundamentals of testing
  - Testing necessity
  - Understanding testing
  - Principles of testing
  - Test Process
  - Psychology of testing
  - Code of Ethics
- Testing throughout the software life cycle
  - Methodologies
  - Test levels
  - Test types
  - Maintenance testing
- Static techniques
  - Techniques and the test process
  - Review process
  - Analysis with tools

Day 2:

- Static techniques continued
  - Review process
  - Analysis with tools
- Test design techniques
  - Test development process
  - Test design techniques
  - Black box and white box techniques
- Test management
  - Test organisation
  - Test planning and estimation
  - Monitoring and controlling test progress

Day 3:

- Test management continued
  - Configuration management
  - Risks and testing
  - Incident management
- Tool support for testing
  - Types of test tools
  - Effective use of test tools
  - Introducing a tool into the organisation

Course Delivery

The course delivery comprises instructor-led seminars interspersed with practical exercises for both the group and the individual.

This short course is primarily designed to be completed during the daily sessions but some additional homework will be required. Completion of homework assignments within the required timeframe is essential. Theoretical concepts are covered in lecture sessions, while richer understanding is gained in applying these concepts in a simulated work environment.