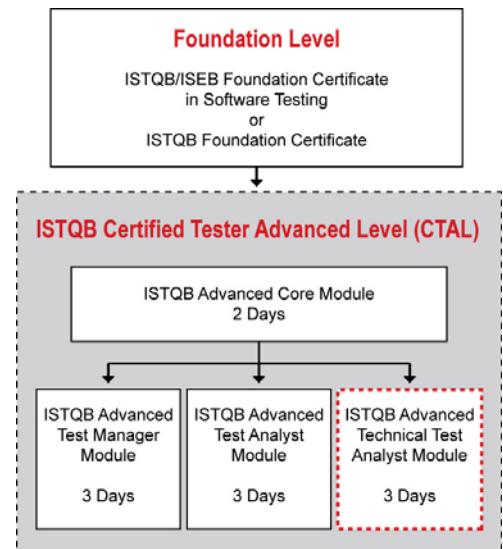


ISTQB Advanced Technical Test Analyst Module

This three day course follows on from the *ISTQB Advanced Level Core Module* and leads to the *ISTQB Advanced Technical Test Analyst* certification.

The course focuses specifically on technical test analyst issues such as producing test documentation in relation to technical testing, choosing and applying appropriate specification-based, structure-based, defect-based and experience-based test design techniques, and specifying test cases to evaluate software characteristics.

The prerequisite *ISTQB Advanced Core Module* covers elements common to all three advanced level streams in one two day course. Each of the three ISTQB Advanced streams – Test Manager, Test Analyst and Technical Test Analyst – is usually trained over five days. Completing the *Advanced Core Module* once thus saves the candidate four days training in attaining the full *Certified Tester Advanced Level* qualification: *CTAL – Full (Test Manager, Test Analyst and Technical Test Analyst)*.



Course Objectives

- Provide an understanding of technical testing issues that goes beyond the ISTQB Foundation level.
- Provide the necessary skill set required for the tester to conduct technical testing activities and analyse the internal structure of the system in sufficient detail to meet the expected quality level.
- Explain the various functional-based, structural-based, defect-based and experienced-based test design techniques that are applicable for this qualification.

Emphasis will be on technical testers; spreadsheets, templates and utilities will be provided to help students to devise tests that are both effective and efficient, giving best value for the testing done in the time given.

Who Will Benefit

This three day course is appropriate for test managers, test team leaders, development managers, project managers and anyone wishing to gain the *ISTQB Advanced Level Technical Test Analyst* qualification.

Skills Gained

- Identify and choose appropriate test design techniques for different applications.
- Ability to analyse internal system structure in sufficient detail to meet expected quality levels.
- Understand the differences between test conditions, test cases, test procedures and test scripts, and identify when and when not to produce them.
- Understand and use appropriate functional-based, structural-based, defect-based and experienced-based test design techniques.
- Evaluate and apply suitable techniques to test quality characteristics such as performance, reliability, accessibility and usability.
- Knowledge of static and dynamic analysis and the tools that support them.
- Application and use of keyword-driven scripting techniques for automated testing.

Course Content

- **Test Techniques: Specification-Based**

Explains and demonstrates how to use and apply the following test design techniques:

- Equivalence Partitioning
- Boundary Value Analysis
- Decision Tables
- State Transition Testing

- **Test Techniques: Structural-Based**

Explains and demonstrates how to use and apply the following test design techniques:

- Statement Testing
- Decision Testing
- Condition Determination Testing
- Multiple Condition Testing

- **Test Techniques: Defect and Experience-Based**

- Describes the principles and reasons for defect-based techniques and differentiates its use from specification-based and structure-based techniques.
- Explains, using examples, the importance of defect taxonomies and their uses.

The following defect and experienced-based techniques will be described and used to generate tests:

- Error Guessing
- Checklist-based
- Exploratory Testing
- Attacks

Candidates will analyse various systems in order to determine which specification-based and defect-based techniques best fit the application being tested.

- **Static Analysis**

Teaches understanding of and differentiation between control flow and data flow defects, and how static analysis tools can assist the tester in this task.

- **Dynamic Analysis**

Explains dynamic analysis and its importance in determining various memory related defects.

- **Test of Software Characteristics**

Testing the system's functionality is an important aspect for every tester, focusing on what the system does. Another vital area for every tester is to test the software's characteristics – how well it behaves. Analysis of suitable techniques is provided to ascertain what characteristics are tested by technical testers. Quality characteristics for technical testers include:

- Technical Security
- Reliability
- Efficiency
- Performance, load, stress and scalability testing
- Maintainability
- Portability

- **Test Automation**

- Provides valuable insight into the production of keyword-driven scripting for use in test execution tools and how performance tools work, providing the tester with information about efficiency characteristics of the application.
- Specific tools will be described that will assist the technical tester.

The Exam

This course will provide the candidate with the necessary knowledge and skills to sit the *ISTQB Advanced Technical Test Analyst Certificate* multiple-choice exam. Candidates will be given the opportunity to sit the examination at the end of the course.

Information about the certification can be found on the International Software Testing Qualifications Board (ISTQB) website: <http://www.istqb.org/>

Course Details

- **Prerequisites**

Candidates wishing to take the *ISTQB Advanced Technical Test Analyst Certificate* must hold the *ISTQB/ISEB Foundation Certificate* or *ISTQB Certified Tester Foundation Level Certificate* and have completed the *ISTQB Advanced Core Module*. There are certain work experience prerequisites, a document detailing the prerequisites can be downloaded from the South African Software Testing Qualifications Board (SASTQB) site (www.sastqb.org.za) for more detailed information. If you wish to sit the course without taking the exam, there are no prerequisites.

- **Course presentation and duration**

The course is presented by an experienced software testing practitioner. The course duration is three days. It runs from 8:00 to 17:30. This includes a lunch and two tea breaks daily. Course dates can be found on our website www.testdata.co.za.

- **Training style**

The course is conducted in a classroom style. Candidates use practical tasks to layer theoretical concepts.

- **Comprehensive and accredited course materials, certification and assessment**

Comprehensive course notes are provided. Candidates will be given exercises, practice exams and learning aids to assist in preparation for the final exam.

- **Accreditation**

Test and Data Services is an accredited ISTQB Training Provider.

<http://www.sastqb.org.za/listAccreditations.html>

- **Training Venues**

Test and Data Services presents courses at several well-established training facilities in Midrand (near Johannesburg and Pretoria), Cape Town and Durban. Training can be arranged at the client's premises, depending on adequate facilities and candidate numbers. Training courses can also be provided internationally.

Contact

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