

# ISTQB Expert Level overview

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**Produced by the ‘Expert Level Working Party’  
International Software Testing Qualification Board**

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# 1. Introduction

This document presents an overview and leading principles of the ISTQB expert level. Before going into the ISTQB expert level, we should define what it means to be a testing expert.

## **The testing expert**

An expert is a person with the special skills and knowledge representing mastery of a particular testing subject. Being an expert means possessing and displaying special skills and knowledge derived from training and experience.

A testing expert is one that has a broad understanding of testing in general, and an in depth understanding in a special test area. An in depth understanding means sufficient knowledge of testing theory and practice to be able to influence the direction that an organization and/or project takes when creating, implementing and executing testing processes related to the special area.

## 2. Modular expert level

There is a common understanding that an expert is often an expert in only a certain area of testing. This requires an ISTQB multi-module expert level. There are a number of ways of organizing the expert level modules, e.g. domain-based, testing-based or level of technicality. The expert level will follow a testing-based structure for the modules, e.g. test management, test design, static testing, test automation, test process improvement. The modules can be derived from the chapters as identified in the ISTQB advanced level syllabus, but are not limited to this. The modules shall also be linked to the various testing roles, e.g. test leader, test consultant, test automation engineer, test analyst etc. In addition to the test topic that is being addressed each module will also have a small section focusing on ‘being an expert’.

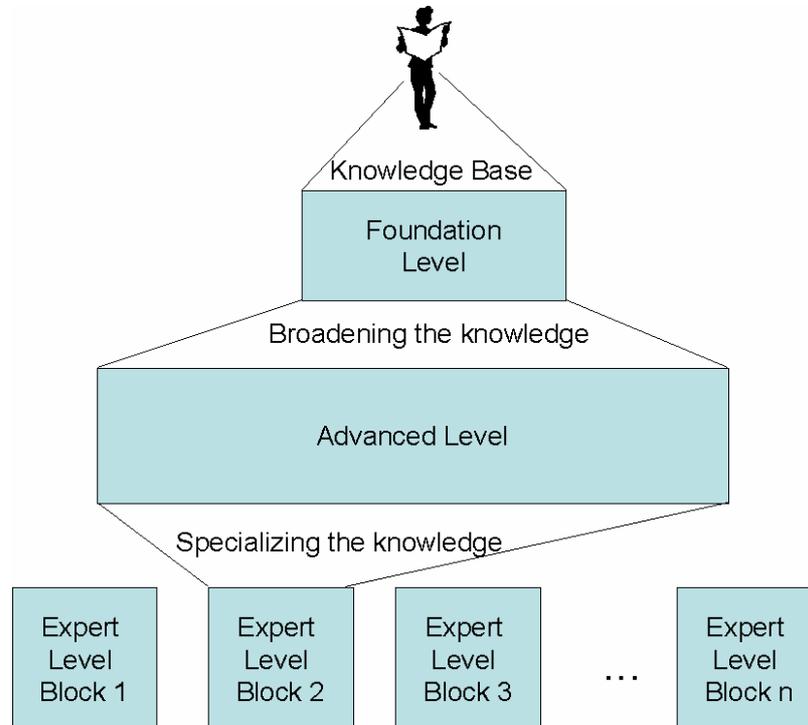
As stated the modules at expert level can be identified following the structure (chapters) of the ISTQB Advanced level syllabus. However, they are by no means limited to this structure and new modules can in the future be identified and developed based on market needs and requirements. The number of expert level modules will be a limited to make them economically feasible, manageable and clear to the market. In the same context, modules will not be defined too narrow, e.g. one of every ISO 9126 non-functional characteristic. An expert level module shall at least cover five days of class training. Modules shall be truly international, supported by a majority of the national boards, and explicitly approved by the ISTQB board. A proposal for an expert level module must be supported by at least three national boards that have sufficient experience in the ISTQB Advanced level certification.

### **Candidate modules**

Based on the above the expert level working party has identified the following initial list of candidate expert level modules:

- Test management (including risk management)
- Test design techniques
- Non-functional testing, e.g security testing
- Static testing, e.g. reviews and inspections
- Test tools and automation
- Test process improvement.

Note that the expert level modules Improving the testing process, Test management and Test automation are already in progress. A decision has also been taken to develop an expert level syllabus on security testing and TTCN-3. Based on the structure it is possible to become an ISTQB testing expert in just one module, one does not have to pass all expert level modules. The view of the expert level is depicted in the following figure:



### 3. Syllabi

As at Foundation and at Advanced level, syllabi are needed for expert level. However, the expert level syllabi may well be less detailed than syllabi at Foundation or Advanced level. They will provide more focus on ‘what’ in stead of on ‘how’. It will define on a broad level the topics to be covered that are examinable for the specific module. As with foundation and advanced the expert level syllabi will be supported by clear learning objectives (LO’s). This approach will result shorter syllabi, open to ‘all’ approaches. With a modular expert level, separate syllabi are needed. One for each expert level module.

### 4. Entry Criteria

The criteria are set to ensure good and consistent quality of the expert level. It is not expected that the majority of testers ever reach expert level, it needs to be earned. Thus the quality of the expert level will be controlled by strict enough criteria for all parties of the process.

#### Participants entry criteria

A participant to the expert level examination needs to have an ISTQB Advanced level certificate (or equivalences, e.g. ISEB Practitioner). Whether full Advanced is needed, or having passed “just” one module is sufficient will be determined per expert level module and defined in the expert level module syllabus. Although other formal entry requirements are not mandatory, it is recommended for participants to have at least seven years of practical testing experience.

### **Lecturer entry criteria**

At expert level there will be a formal accreditation of the lecturers. Lecturer needs to submit an application form to the national board. A lecturer needs to be able to build on what has been taught on previous ISTQB levels. The lecturer also must be able to convey that expertise to the participants effectively and make them learn. This can be judged with following criteria.

- The lecturer has passed at least the required ISTQB Advanced module(s) as defined by the entry criteria or equivalent (ISEB Practitioner);
- It is highly recommended that the lecturers possesses the full ISTQB Advanced certificate.
- It is highly recommended to have a university degree, have teaching experience, be recognized as an expert and have sound experience. As reaching all of these is not often practical, it will be possible to compensate one with another. Thus the lecturer needs to meet additionally at least 2 of the criteria below:
  - The lecturer has substantial teaching experience (5 years with at least 3 classes totaling 5 days per year taught) and teaching experience in the subject matter (3 or more classes taught in the area of expert level module);
  - The lecturer is a recognized testing industry leader, conference speaker, author or equivalent;
  - The lecturer has advanced university degrees related to testing (e.g. B.Sc, M.Sc. or Ph.D.);
  - The lecturer has at least 6 years of real world experience in testing and 2 years on the expertise module area;

In case of not fulfilling the criteria, the board can appoint the lecturer to be a 2<sup>nd</sup> lecturer in expert level courses, if they are full ISTQB Advanced and fulfill only one criterion from the additional criteria list. After 3 co-deliveries with an expert level lecturer, 2<sup>nd</sup> lecturer can resend his/her application and gain the full lecturer status at the discretion of the Board.

### **Expert level courses**

A course provider needs to submit an application form to national board to have a course material of an expert level module approved. The national board approves the course material based on the following criteria. Note that criteria for accepting a course material, are to be defined in more detail in the syllabi.

- Course material for an expert level module fulfils the syllabus of the equivalent expert level syllabus
- Module length at least 5 days (exceptions to this rule are possible but need explicit approval from the ISTQB board)
- At least 50% of the time will be spent on practical exercise and discussions.
- Maximum class size 10 (to enable personal focus from the lecturer)
- Needs to use at least the terms defined in ISTQB glossary.

### **Expert level course provider criteria**

A course provider needs to submit an application form to the national board. The national board grants the course provider a right to provide ISTQB expert level courses on an expert level module based on following criteria.

- It is required that the provider is certified to provide also foundation and advanced level ISTQB courses. Alternatives are allowed, if the reason is well-formulated to the board.

- Course provider has at least 2 expert level lecturers for the module approved by national board, earlier or simultaneously. Having only 1 lecturer can be approved at the discretion of the Board.
- Course provider has recognized status in testing (as a course provider or other), especially in the expert level module
- If the course provider applicant is not a course provider already, all the general course provider checks for ISTQB course providers need to be checked by the board (e.g. administrative capabilities, change management of course materials, etc).

## **5. The training**

Training is expected also at expert level, although as at other ISTQB levels formally not required. The training will be based on a substantial case study, since the expert will be an expert possessing also practical skills. A possibility could be to provide attendees with assignments that they have to carry out in real-life project(s) and report back on. The training may therefore be split into two parts, traditional lecturing and coaching during case studies. It is important to again emphasize that someone with knowledge, but without the necessary skills is not perceived as being an expert.

## **6. Examination**

As an expert must not only be able to show knowledge, but also in depth practical skills, an exam only using multiple choice questions is not preferred. The exam will therefore consist of essay type exam, partly mixed with some multiple choice questions. The type of essay type questions will be questions that ask the 'expert' to look at a given topic from different perspectives, compare and conclude to some opinion (higher knowledge levels). The specific rules for examination will be defined in the detailed expert level module syllabus. It will in principle also be possible to take the exam, without having followed the training.

## **7. Exit requirements and certification**

In addition to passing the exam, proof needs to be provided of practical working experience in the testing field in general and specifically to the expert level module that applies before the expert level certificate is awarded. In addition to passing the exam the following requirements apply:

- at least five years of testing experience in practice (CV needs to be submitted including two references)
- at least two years of experience in the expert level module topic (CV needs to be submitted including two references)
- at least one paper written and published, OR a presentation is held at a testing conference regarding the expert level module topic

Persons that formally comply with the defined exit criteria will receive the formal ISTQB Expert level certificate for the underlying module. It is expected that in the near future possessing an ISTQB expert level certificate will also allow those expert to use the Certified Tester Expert Level (CTEL) acronym.

## **8. Continuous education**

Continuous education has been adopted as an important principle. A register of experts and an organizational entity following up on the continuous education will be established. The continuous education will be carried out based on a five year cycle. This will be done on a credit system whereby points can be gained by at for instance attending special interest group meeting, taking courses, writing papers, public speaking and working experience.