

# Overview

## Advanced Level Syllabus Security Tester

Version 2016

---

International Software Testing Qualifications Board

---



Copyright Notice

This document may be copied in its entirety, or extracts made, if the source is acknowledged.

Copyright © International Software Testing Qualifications Board (hereinafter called ISTQB®).

## Revision History

Version	Date	Remarks
2016	18 March 2016	GA Release

## Table of Contents

<b>Revision History</b> .....	3
<b>Table of Contents</b> .....	4
<b>Acknowledgements</b> .....	5
<b>1 Introduction</b> .....	6
1.1 Career Paths for Testers .....	6
1.2 Entry Requirements .....	6
1.3 Structure and Course Duration .....	6
1.4 Intended Audience .....	6
1.5 Learning Objectives .....	6
1.6 Name and Acronym of the Certification .....	7
1.7 Handling of Standards .....	7
<b>2 Overview of ISTQB CTAL-SEC Syllabus</b> .....	8
2.1 Business Outcomes .....	8
2.2 Content .....	8
<b>3 Documents Related to the CTAL-SEC Certification</b> .....	9

## Acknowledgements

This document was produced by a core team from the International Software Testing Qualifications Board Advanced Level Working Group.

The core team thanks the review team and all National Boards for their suggestions and input.

At the time the Advanced Level syllabus for this module was completed, the Advanced Level Working Group – Security Tester had the following membership:

The core team authors for this syllabus: Randall Rice (Chair), Hugh Tazwell Daughtrey (Vice Chair), Frans Dijkman, Joel Oliveira, Alain Ribault.

The following persons participated in the reviewing, commenting and balloting of this syllabus (alphabetical order): Tarun Banga, Hugh Tazwell Daughtrey (Vice-Chair), Frans Dijkman (Author), Prof. Dr. Stefan Karsch, Sebastian Malyska, Satoshi Masuda, Raine Moilanen, Joel Oliveira, Alain Ribault, Randall Rice (Chair), Ian Ross, Kwangik Seo, Dave van Stein, Dr. Nor Adnan Yahaya, Wenqiang Zheng.

In addition, we recognize and thank the leaders and members of the Expert Level Working Party for their early and continued guidance: Graham Bath (Chair, Expert Level Working Party), Judy McKay (Vice Chair, Expert Level Working Party).

This document was formally released by the General Assembly of ISTQB® on March 18, 2016.

## 1 Introduction

This overview document is intended for anyone interested in the ISTQB Certified Tester Advanced Level Security Tester (CTAL-SEC) Syllabus. It provides a high-level introduction to leading principles and an overview of the content of the syllabus.

In this document, the Business Outcomes of the CTAL-SEC syllabus are defined. Each Business Outcome is provided through a specific statement of what can be expected from a person who achieves ISTQB CTAL-SEC Certification. It outlines the benefits for companies that are considering the development of specific Security Testing skills at this level.

### 1.1 Career Paths for Testers

Based on the Certified Tester Foundation Level, the content of the Advanced Security Tester syllabus provides additional skills for professional testers. A person holding the CTAL-SEC Certificate has extended the broad understanding of testing acquired at the Foundation Level to specific capabilities for Security Testing including approaches, methodology and tools.

### 1.2 Entry Requirements

In order to best utilize the content of this syllabus, the candidate shall have mastered the learning objectives of the Foundation Level syllabus and will be familiar with the security testing concepts in the Advanced Technical Test Analyst syllabus. In addition, candidates should have at least three years of experience in security testing or a related technical testing field.

### 1.3 Structure and Course Duration

A certified advanced security tester course has a minimum length 1,110 minutes, which translates to roughly 2 days, 4 hours and 30 minutes of training (based on 7 hour days).

### 1.4 Intended Audience

The Advanced Level Certified Security Tester syllabus is intended to build upon the knowledge of a Foundation Level tester who has some experience in security testing and wishes to build on that knowledge.

### 1.5 Learning Objectives

In general the CTAL-SEC syllabus is examinable at a K1 level, i.e., the candidate will recognize, remember and recall terms and concepts stated in the Foundation and the specific CTAL-SEC syllabus.

The relevant Learning Objectives at K2, K3 and K4 levels are provided at the beginning of each chapter within the CTAL-SEC syllabus.

## 1.6 Name and Acronym of the Certification

The name of this certification is "Certified Tester Advanced Level – Security Tester".

The acronym is: "CTAL-SEC".

## 1.7 Handling of Standards

Standards (IEEE, ISO, etc.) are referenced in this syllabus. The purpose of these references is to provide a source of additional information if desired by the reader. Please note that only the items from these standards that are referenced specifically in the syllabus are eligible for examination. The standards documents themselves are not intended for examination and are included only for reference.

## 2 Overview of ISTQB CTAL-SEC Syllabus

### 2.1 Business Outcomes

This section lists the Business Outcomes expected of a candidate who has achieved the ISTQB CTAL-SEC certification.

Advanced Level testers who have passed the “Advanced Security Tester” module exam should be able to accomplish the following Business Objectives:

- SEC-1 Plan, perform and evaluate security tests from a variety of perspectives – policy-based, risk-based, standards-based, requirements-based and vulnerability-based.
- SEC-2 Align security test activities with project lifecycle activities.
- SEC-3 Analyze the effective use of risk assessment techniques in a given situation to identify current and future security threats and assess their severity levels.
- SEC-4 Evaluate the existing security test suite and identify any additional security tests.
- SEC-5 Analyze a given set of security policies and procedures, along with security test results, to determine effectiveness.
- SEC-6 For a given project scenario, identify security test objectives based on functionality, technology attributes and known vulnerabilities.
- SEC-7 Analyze a given situation and determine which security testing approaches are most likely to succeed in that situation.
- SEC-8 Identify areas where additional or enhanced security testing may be needed.
- SEC-9 Evaluate effectiveness of security mechanisms.
- SEC-10 Help the organization build information security awareness.
- SEC-11 Demonstrate the attacker mentality by discovering key information about a target, performing actions on a test application in a protected environment that a malicious person would perform, and understand how evidence of the attack could be deleted.
- SEC-12 Analyze a given interim security test status report to determine the level of accuracy, understandability, and stakeholder appropriateness.
- SEC-13 Analyze and document security test needs to be addressed by one or more tools.
- SEC-14 Analyze and select candidate security test tools for a given tool search based on specified needs.
- SEC-15 Understand the benefits of using security testing standards and where to find them.

### 2.2 Content

See Certified Tester Advanced Level Syllabus – Security Tester document.



### 3 Documents Related to the CTAL-SEC Certification

The documents related to the ISTQB CTAL-SEC Certification are the following:

- General Overview (this document) – provides the business outcomes of the certification
- Syllabus – details the overall syllabus for ISTQB CTAL-SEC
- Glossary of Terms – provides the definition of the terms defined in each chapter
- Sample Exam Questions – provides a sample exam for the certification.
- Accreditation Rules – provides the accreditation rules to be followed by training providers when seeking accreditation of their courses
- Exam Guidelines – provides the requirements for learning objective coverage for a certification exam