

# ISTQB Certified Tester Advanced Level Test Manager (CTAL-TM)



- Integrate testing into your software development process
- Establish a realistic test approach and strategy
- Understand the Test Manager's role in reviews
- Plan, estimate, and schedule the testing effort
- Dynamically monitor, manage, and report testing activities
- Understand the Test Manager's role in defect management
- Plan and implement test automation
- Measure test effectiveness and project progress
- Evaluate and improve your test process
- Develop new skills to lead your test team

The ISTQB® *Advanced Tester Certification—Test Manager* training course expands on the test techniques and methods introduced in the ISTQB Foundation certification course and addresses those areas of the ISTQB advanced syllabus specifically related to the Advanced Test Management certification.

The course focuses on the key areas that are vital for successful test management: the foundations of software testing, test management, standards and test improvement processes, and people skills.

Specific topics covered include testing as part of the software development lifecycle, metrics, test documentation, risk analysis, estimation, test management issues, test automation, process improvement models, individual skills for testers and managers, team dynamics, leadership, and motivation.

This course is filled with hands-on exercises to help you practice the methods and techniques taught in the course. This course covers the syllabus for the Advanced Test Management certification and will help you prepare for the exam.

## Who Should Attend?

- Individuals who have taken the ISTQB Certified Tester—Foundation Level training and wish to expand their knowledge and skills into more advanced areas
- Individuals who have received the ISTQB Foundation Level certification, have met the criteria for taking the advanced certification exams, and wish to prepare for those exams.
- Anyone wishing to learn more about advanced testing topics

## ISTQB® Certification & Exam

The International Software Testing Qualifications Board (ISTQB) is the world's most widely-recognized certification of software testing skills and knowledge. Founded in 2002, the ISTQB is a not-for-profit association that has issued more than 750,000 certifications in 129 countries around the globe. The ISTQB Software Tester Certification—Foundation Level (CTFL) is a prerequisite for the ISTQB® Advanced Level Test Manager (CTAL-TM) exam. In order to be eligible to take any of the Certified Tester—Advanced Level (CTAL) exams, potential examinees must submit proof of Certified Tester—Foundation Level (CTFL) certification.

For private and team training, the ISTQB Advanced Level Test Manager (CTAL-TM) exam fee can be included in the course price upon request.

Please reach out to client support with any questions [clientsupport@coveros.com](mailto:clientsupport@coveros.com) [1].

## Course Outline

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### 1.1 Fundamental Test Process

#### 1.2.1 Test Planning

Activity timing

#### 1.2.2 Test Monitoring and Control

### 1.3 Test Analysis

Advantages of Detailed Test Conditions

Disadvantages of Detailed Test Conditions

When Are Detailed Test Conditions Effective?

#### 1.3 Test Analysis Exercise

### 1.4 Test Design

Mapping test cases to requirements

Inventory tracking matrix

#### 1.4 Test Design Exercise

### 1.5 Test Implementation

Sequence of Test Execution

Disadvantages of Early Test Implementation

Advantages of Early Test Implementation

#### 1.5 Test Implementation Exercise

### 1.6 Test Execution

#### 1.6 Test Execution Exercise

### 1.7 Evaluating Exit Criteria and Reporting

### 1.8 Test Closure Activities

Test Completion

Test Artifact Handover

Lessons Learned

#### 1.8 Test Closure Activities Exercise

### 2.2 Test Management in Context

Understanding Stakeholders

Who Are the Stakeholders?

Other SDLC Activities and Products

Alignment of Test Activities

Sequential Models

Additional Test Levels

Elements of a Test Level

Levels of Testing Within the Lifecycle

Managing Non-Functional Testing

Integrating Non-Functional Tests into SDLC

Benefits and Challenges of Experience-Based Testing

Managing Experience-Based Testing

#### 2.2 Stakeholder Exercise

### 2.3 Risk-Based Testing

Quality Risks

Risk Identification

Categorization of Risk

Light-weight Risk-Based Testing Techniques

Heavy-weight Risk-Based Testing Techniques

### 2.9 Managing the Application of Industry Standards (continued)

Sample ISO standards

IEEE

Example of national standard

Domain-Specific standards

CMMI – Capability Maturity Model Integration

PMI, PRINCE2 and ITIL

Considerations when using standards

### 2.9 Managing the Application of Industry Standards

#### Example 1

### 3.2 Management Reviews and Audits

Key Characteristics

Audits

Key Characteristics of Audits

### 3.3 Managing Reviews

Formulating a Review Strategy

Addressing Reviews During Test Planning

Measuring the Effectiveness of Reviews

#### 3.3 Managing Reviews Exercise

### 3.4 Metrics for Reviews

Metrics for Product Evaluation

Metrics for Process Evaluation

#### 3.4 Metrics for Reviews Exercise

### 3.5 Managing Formal Reviews

Characteristics of a Formal Reviews

Fulfillment of Prerequisites

### 4.2 Defect Lifecycle and SDLC

Economics of test and failure

Defect Workflow and States

Cross-Functional Defect Management

#### 4.2 Defect Lifecycle and SDLC Exercise

### 4.3 Defect Report Information

Defect Data

Standards for Defect Reporting

ISO 9126

IEEE 829

IEEE 1044

Orthogonal defect classification

#### 4.3 Defect Report Information Exercise

### 4.4 Assessing Process Capability

Using Defects for Process Improvement

### 5.2 Test Improvement Process

Why test process improvement models?

Process assessment

Process capability determination

Process improvement

## **Measuring Success of Risk-Based Testing**

### **Techniques for Test Selection**

#### **2.3 Risk-Based Testing Exercise**

#### **2.4 Test Documentation**

##### **Test Documentation**

Test policy

Test strategy

Master test plan

Level test plan

##### **Test Policy**

##### **Project Risk Management**

##### **Examples of Project Risk Mitigation**

##### **Managing Project Risk**

#### **2.4 Test Documentation Exercise**

#### **2.5 Test Estimation**

Factors that influence test estimation

How good is our industry (at estimating)?

#### **2.5 Test Estimation Exercise**

#### **2.6 Defining and Using Test Metrics**

What makes a good measure?

Metrics for test closure

Using metrics

Using metrics for test control

A sample tester's dashboard

*Exercise – Metrics*

#### **2.6 Defining and Using Test Metrics Exercise**

#### **2.7 Business Value of Testing**

Quantitative value of testing

Economics of test and failure

Qualitative value of testing

Cost of (poor) quality

#### **2.7 Business Value of Testing Exercise**

#### **2.8 Distributed, Outsourced, and Insourced Testing**

#### **2.9 Managing the Application of Industry Standards**

Sources of standards

International standards

Process assessment

Types of process improvement models

#### **5.3 Improving the Test Process**

##### **Test Improvement Models**

##### **Improving the Testing Process**

Change process steps: IDEAL

#### **5.3 Improving the Test Process Exercise**

#### **5.4 Improving the Test Process with TMMi**

#### **5.5 Improving the Test Process with TPI Next**

#### **5.6 Improving the Test Process with CTP**

#### **5.7 Improving the Test Process with STEP**

#### **6.0 Test tools and automation**

##### **6.2 Tool Selection**

##### **6.3 Tool Lifecycle**

##### **6.3 Tool Metrics**

#### **7.0 People skills**

##### **7.2 Individual Skills**

Individual skills – Testers

Individual Skills – User View

Individual Skills – Software Development Process

Individual Skills – Test Techniques

Individual Skills – For Test Managers

Individual Skills – Interpersonal Skills

Building the Perfect Team

Skills Assessment

##### **7.2 Individual Skills Exercise**

##### **7.3 Test Team Dynamics**

Test Team Dynamics – New Staff Members

Technical Skills-Hard Skills

Technical Skills-Soft Skills

#### **7.4 Testing within an Organization**

##### **7.5 Motivation**

Motivation and Morale

Motivation and Metrics

##### **7.6 Communications**