



ISTQB Certified Tester Specialist Level Testing with Generative AI (CT-GenAI)

Duration: 2 days Live online

Course Overview

This course provides comprehensive training on leveraging Generative AI (GenAI) in software testing. It covers foundational concepts of AI and LLMs, prompt engineering techniques, risk management, LLM-powered test infrastructure, and organizational strategies for integrating GenAI into test processes.

The course combines theory with hands-on exercises to build practical skills in applying GenAI for test analysis, design, automation, and monitoring.

Who should attend?

This course is designed for:

- Testers, Test Analysts, Test Automation Engineers, Test Managers, User Acceptance Testers, and Software Developers.
- Project Managers, Quality Managers, Software Development Managers, Business Analysts, IT Directors, and Management Consultants seeking an understanding of GenAI in testing.

Prerequisites & pre-reading guidelines

Attendees intending to take the ISTQB Certified Tester AI Testing examination must hold the Certified Tester Foundation Level certificate.

Familiarity with basic software testing concepts and test automation is strongly recommended.

How certification is earned

The course and syllabus include a one-hour multiple-choice exam. To earn certification, participants must achieve a score of 65% or higher. This exam is typically scheduled on a separate day, either proctored online or in-class, but not within the four days of the course. Additional time may be granted under certain circumstances, such as for non-native English speakers.

Course Objectives

By the end of this course, participants will:

- Understand fundamental concepts, capabilities, and limitations of Generative AI in testing.
- Develop practical skills in prompt engineering for software test tasks.
- Identify and mitigate risks of using GenAI, including hallucinations, reasoning errors, and data privacy issues.
- Explore LLM-powered test infrastructure and operational practices (LLMOps, fine-tuning).

Context

Generative AI is transforming software testing by enabling automation, improving test coverage, and accelerating test cycles.

However, it introduces new challenges such as non-deterministic behaviour, security risks, and environmental impact.

This course equips professionals with the knowledge and skills to harness GenAI responsibly and effectively.

Related courses

- ISTQB® Foundation Level
- ISTQB® Advanced Level – Test Analyst
- ISTQB® Advanced Level – Technical Test Analyst
- ISTQB® Certified Tester AI Testing
- ISTQB® Specialist Level – Test Automation Engineer

Course Outline

1. Introduction to Generative AI for Software Testing (100 min)

- AI spectrum: Symbolic AI, ML, Deep Learning, GenAI
- Basics of LLMs, tokenization, embeddings, multimodal models
- Applications of GenAI in testing (chatbots vs. LLM-powered tools)

2. Prompt Engineering for Effective Software Testing (365 min)

- Structured prompts: role, context, instruction, input, constraints, output format
- Core techniques: prompt chaining, few-shot, meta prompting
- Applying prompts to test analysis, design, automation, monitoring
- Evaluating and refining prompts using metrics

3. Managing Risks of Generative AI in Software Testing (160 min)

- Hallucinations, reasoning errors, biases: detection and mitigation
- Data privacy and security risks; compliance with GDPR and AI regulations
- Environmental impact and energy considerations
- AI standards and best practice frameworks (ISO/IEC 42001, EU AI Act)

4. LLM-Powered Test Infrastructure for Software Testing (110 min)

- Architectural components of LLM-powered test tools
- Retrieval-Augmented Generation (RAG)
- Fine-tuning and LLMOps for operationalizing GenAI

5. Deploying and Integrating Generative AI in Test Organizations (80 min)

- Roadmap for adoption; risks of shadow AI
- Selecting LLMs/SLMs for test tasks
- Change management: building AI skills, evolving roles and processes

Contact

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