KOENIG SOLUTIONS · COURSE OUTLINE

ISTQB Software Testing Foundations with Agile Practices

Learn to apply ISTQB testing fundamentals, static testing, test design techniques and agile testing practices across the software development lifecycle.

5 Days	13	61
DURATION	MODULES	TOPICS

COURSE OVERVIEW

This course covers the fundamentals of testing, including testing principles, test activities and roles, and how testing fits throughout the software development lifecycle across different test levels and types. It then addresses static testing and review processes, followed by test analysis and design techniques spanning black-box, white-box, experience-based and collaboration-based approaches. It also covers managing test activities such as planning, risk management, monitoring and defect management, along with tool support for testing. The later part covers agile software development principles and processes, agile testing methods such as TDD, ATDD and BDD, quality risk assessment and estimation, agile testing techniques, and the tools used to support agile testing.

WHO THIS COURSE IS FOR

- **Software Testers**
- **QA Engineers**
- **Test Analysts**
- **Test Managers**
- **Agile Team Members**
- **Business Analysts**

LEARNING OBJECTIVES

- Explain testing principles, objectives and key terminology
- Describe testing activities and roles across the lifecycle
- Identify test levels and test types used in software testing
- Apply static testing and review techniques to work products
- Apply black-box, white-box and experience-based test design techniques
- Plan test activities including estimation and risk management
- Compare traditional and agile testing approaches
- Apply agile testing methods such as TDD, ATDD and BDD

COURSE SYLLABUS

13 Modules, 61 Topics

DAY 1 Foundations of Testing

01

Fundamentals of Testing

TOPICS

- What is Testing? (Objectives, Testing vs Debugging)
- Why is Testing Necessary? (Contribution, QA Role, Errors, Defects, Failures)
- Testing Principles
- Test Activities, Testware, Roles
- Essential Skills & Good Practices

02

Testing Throughout the Software Development Lifecycle

TOPICS

- SDLC Models
- DevOps & Testing
- Shift-Left Approach
- Retrospectives & Process Improvement
- Test Levels (Unit, Integration, System, Acceptance)
- Test Types (Functional, Non-functional, Regression, Confirmation)
- Maintenance Testing

DAY 2 Static Testing & Test Design Techniques

03

Static Testing

TOPICS

Work Products · Value of Static Testing · Feedback & Review Process · Roles & Responsibilities in Reviews · Review Types & Success Factors

04

Test Analysis & Design Techniques

TOPICS

- Classification of Test Techniques
- **Black-Box:** Equivalence Partitioning, Boundary Value Analysis, Decision Table, State Transition
- **White-Box:** Statement & Branch Testing, Coverage
- **Experience-based:** Error Guessing, Exploratory, Checklists
- **Collaboration-based:** User Story Writing, Acceptance Criteria, ATDD

DAY 3 Test Management & Tools

05

Managing Test Activities

TOPICS

- Test Planning (Purpose, Plan Content, Entry/Exit Criteria, Estimation, Prioritization)
- Test Pyramid & Testing Quadrants
- Risk Management (Attributes, Product/Project Risks, Risk Analysis & Control)
- Monitoring, Control & Completion (Metrics, Reports, Communication)
- Configuration & Defect Management

06

Test Tools

TOPICS

Tool Support for Testing · Benefits & Risks of Test Automation

DAY 4 Agile Fundamentals & Processes

07

Agile Software Development

TOPICS

- Agile Manifesto & Principles
- Whole-Team Approach
- Early & Frequent Feedback
- Agile Approaches (Scrum, XP, Kanban)
- Collaborative User Story Creation
- Retrospectives
- Continuous Integration
- Release & Iteration Planning

08

Agile Testing Principles, Practices & Processes

TOPICS

Differences: Traditional vs Agile Testing · Testing & Development Activities · Agile Work Products · Test Levels in Agile · Testing & Configuration Management · Independent Testing Options

DAY 5 **Agile Testing Methods & Tools**

09

Agile Testing Methods

TOPICS

TDD, ATDD, BDD · Test Pyramid · Testing Quadrants, Levels, Types · Role of a Tester

10

Assessing Quality Risks & Estimation

TOPICS

Quality Risks in Agile · Estimating Test Effort

11

Agile Testing Techniques

TOPICS

- Acceptance Criteria & Coverage
- Applying ATDD
- Functional & Non-functional Black-Box Techniques
- Exploratory Testing in Agile

12

Agile Tools

TOPICS

Task Management & Tracking · Communication & Information Sharing · Build & Distribution Tools · Configuration Management Tools · Test Design & Execution Tools · Cloud & Virtualization Tools

13

Wrap-up & Exam Readiness

TOPICS

Recap of Key Concepts · Sample Questions

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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