

# uCertify

## Course Outline

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### Art of Software Testing QA



Lesson

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## 1. Course Objective

Gain the knowledge and skills required for starting a career in the field of software testing with the Art of Software QA course. The course provides practical information on software testing and is designed for professional programmers, project managers, and programming and computer science students. The course focuses on testing techniques and helps students fulfill the software testing requirement of today's industries. The course contains interactive learning resources that will help you understand all the aspects of software testing.

## 2. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

## 3. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

## 4. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

## 5. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
  1. Best Postsecondary Learning Solution
  
- **2015**
  1. Best Education Solution
  2. Best Virtual Learning Solution
  3. Best Student Assessment Solution
  4. Best Postsecondary Learning Solution
  5. Best Career and Workforce Readiness Solution
  6. Best Instructional Solution in Other Curriculum Areas
  7. Best Corporate Learning/Workforce Development Solution
  
- **2016**
  1. Best Virtual Learning Solution
  2. Best Education Cloud-based Solution

3. Best College and Career Readiness Solution
4. Best Corporate / Workforce Learning Solution
5. Best Postsecondary Learning Content Solution
6. Best Postsecondary LMS or Learning Platform
7. Best Learning Relationship Management Solution

- **2017**

1. Best Overall Education Solution
2. Best Student Assessment Solution
3. Best Corporate/Workforce Learning Solution
4. Best Higher Education LMS or Learning Platform

- **2018**

1. Best Higher Education LMS or Learning Platform
2. Best Instructional Solution in Other Curriculum Areas
3. Best Learning Relationship Management Solution

- **2019**

1. Best Virtual Learning Solution
2. Best Content Authoring Development or Curation Solution
3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution
2. Best Cross-Curricular Solution
3. Best Virtual Learning Solution

## 6. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the

chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

## Syllabus

Chapter 1: Introduction

Chapter 2: A Self-Assessment Test

Chapter 3: The Psychology and Economics of Software Testing

- The Psychology of Testing
- The Economics of Testing
- Software Testing Principles
- Summary

Chapter 4: Program Inspections, Walkthroughs, and Reviews

- Inspections and Walkthroughs
- Code Inspections
- An Error Checklist for Inspections
- Walkthroughs
- Desk Checking

- Peer Ratings
- Summary

## Chapter 5: Test-Case Design

- White-Box Testing
- Black-Box Testing
- Error Guessing
- The Strategy
- Summary

## Chapter 6: Module (Unit) Testing

- Test-Case Design
- Incremental Testing
- Top-Down versus Bottom-Up Testing
- Performing the Test
- Summary

## Chapter 7: Higher-Order Testing

- Function Testing
- System Testing
- Acceptance Testing
- Installation Testing
- Test Planning and Control
- Test Completion Criteria
- The Independent Test Agency
- Summary

## Chapter 8: Usability (User) Testing

- Usability Testing Basics
- Usability Testing Process
- Summary

## Chapter 9: Debugging

- Debugging by Brute Force
- Debugging by Induction
- Debugging by Deduction



- Debugging by Backtracking
- Debugging by Testing
- Debugging Principles
- Error Analysis
- Summary

## Chapter 10: Testing in the Agile Environment

- Features of Agile Development
- Agile Testing
- Extreme Programming and Testing
- Summary

## Chapter 11: Testing Internet Applications

- Basic E-Commerce Architecture
- Testing Challenges
- Testing Strategies
- Summary

## Chapter 12: Mobile Application Testing

- Mobile Environment
- Testing Challenges
- Testing Approaches
- Summary

### Chapter 13: Appendix A: Sample Extreme Testing Application

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