uCertify

Course Outline

Programming in C# (70-483)

07 May 2024

1. Course Objective
2. Pre-Assessment
3. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions
4. Expert Instructor-Led Training
5. ADA Compliant & JAWS Compatible Platform
6. State of the Art Educator Tools
7. Award Winning Learning Platform (LMS)
8. Chapter & Lessons

   Syllabus

   Chapter 1: Introduction

   Chapter 2: Introducing the Programming C# Certification

   Chapter 3: Basic Program Structure

   Chapter 4: Working with the Type System

   Chapter 5: Using Types

   Chapter 6: Creating and Implementing Class Hierarchies

   Chapter 7: Working with Delegates, Events, and Exceptions

   Chapter 8: Multithreading and Asynchronous Processing

   Chapter 9: Creating and Using Types with Reflection, Custom Attributes, the CodeDOM, and Lambda Expressions

   Chapter 10: Working with Data

   Chapter 11: Working with Language Integrated Query (LINQ)

   Chapter 12: Input Validation, Debugging, and Instrumentation

   Chapter 13: Using Encryption and Managing Assemblies

   Videos and How To
9. Practice Test

   Here's what you get

   Features

10. Live labs
    - Lab Tasks
    - Here's what you get
11. Post-Assessment

1. Course Objective

Prepare for the MCSA certification exam with the Programming in C# (70-483) course and lab. Lab simulates real-world, hardware, software, and command-line interface environments and can be mapped to any text-book, course, or training. The Microsoft C# certification course completely covers the 70-483 exam objectives and helps you master the skills required to manage program flow, create and use types; debug applications and implement security; implement data access, and much more.

2. Pre-Assessment

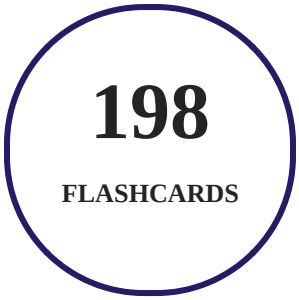
Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

3. Quizzes

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.

4. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.



5. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.

6. 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.

7. 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.

8. 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.

9. 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

10. 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

- Who this Course is For
- What this Course Covers
- How this Course is Structured
- What You Need to Use in this Course
- Conventions

Chapter 2: Introducing the Programming C# Certification

- Getting Certified

- Things to Know About the Test
- How to Study for the Exam Using this Course
- The 70-483 Objectives
- Summary
- Additional Reading and Resources

Chapter 3: Basic Program Structure

- Writing Your First Program
- Controlling Program Flow
- Summary
- Additional Reading and Resources
- Cheat Sheet

Chapter 4: Working with the Type System

- Creating Value Types
- Creating Reference Types
- Understanding Encapsulation
- Understanding Generic Types and Generic Methods

- Summary
- Additional Reading and Resources
- Cheat Sheet

Chapter 5: Using Types

- Converting Between Types
- Manipulating Strings
- Formatting Values
- Summary
- Additional Reading and Resources
- Cheat Sheet

Chapter 6: Creating and Implementing Class Hierarchies

- Inheriting from a Base Class
- Designing and Implementing Interfaces
- Implementing Common Interfaces
- Managing Object Life Cycle
- Summary
- Additional Reading and Resources

- Cheat Sheet

Chapter 7: Working with Delegates, Events, and Exceptions

- Working with Delegates
- Working with Events
- Exception Handling
- Summary
- Additional Reading and Resources
- Cheat Sheet

Chapter 8: Multithreading and Asynchronous Processing

- Creating Responsive Applications
- Working with the Task Parallel Library
- Exploring Advanced Multithreading Programming Topics
- Summary
- Additional Reading and Resources
- Cheat Sheet

Chapter 9: Creating and Using Types with Reflection, Custom Attributes, the CodeDOM, and Lambda Expressions

- Using the System.Reflection Namespace
- Read and Create Custom Attributes
- Generate Code Using the CodeDOM Namespace
- Lambda Expressions
- Summary
- Additional Reading and Resources
- Cheat Sheet

Chapter 10: Working with Data

- Working with Data Collections
- Consuming Data
- Performing I/O Operations
- Understanding Serialization
- Summary
- Additional Reading and Resources
- Cheat Sheet

Chapter 11: Working with Language Integrated Query (LINQ)

- Understanding Query Expressions
- Summary
- Additional Reading and Resources
- Cheat Sheet

Chapter 12: Input Validation, Debugging, and Instrumentation

- Input Validation
- Debugging
- Instrumenting Applications
- Summary
- Additional Reading and Resources
- Cheat Sheet

Chapter 13: Using Encryption and Managing Assemblies

- Using Encryption
- Managing Assemblies
- Summary
- Additional Reading and Resources
- Cheat Sheet

11. Practice Test

Here's what you get

50	2	50
PRE-ASSESSMENTS QUESTIONS	FULL LENGTH TESTS	POST-ASSESSMENTS QUESTIONS

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

12. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

Basic Program Structure

- Writing a Basic C# Program
- Using the foreach Loop
- Using the switch Statement
- Using the Nested Loops for a Lottery Program
- Using the do-while Loop
- Using the if-else Statement

Working with the Type System

- Using the Value Types and their Aliases
- Using the Value Types
- Creating a Structure
- Using enum
- Using Methods in a Class
- Using Constructors
- Depicting Instance Fields
- Overloading Constructors
- Using Properties
- Using Generic Methods

Using Types

- Implementing the Implicit Type Conversion
- Implementing the Explicit Type Conversion
- Using the string Method
- Using StringBuilder
- Formatting Values

Creating and Implementing Class Hierarchies

- Using Interfaces
- Using the using Statement
- Using Objects

Working with Delegates, Events, and Exceptions

- Using a Static Delegate
- Using Instance Delegates
- Using Events
- Using Asynchronous Lambdas
- Performing Exception Handling

Multithreading and Asynchronous Processing

- Using the Thread Pool
- Using Threads
- Using the Parallel Class
- Using Barriers

Creating and Using Types with Reflection, Custom Attributes, the CodeDOM, and Lambda Expressions

- Using the System.Reflection namespace to Get Assembly
- Using Custom Attributes
- Using Lambda Expressions

Working with Data

- Using Arrays
- Using StreamReader
- Using Binary Serialization
- Using Serialization

Working with Language Integrated Query (LINQ)

- Understanding LINQ Queries

Input Validation, Debugging, and Instrumentation

- Using Regular Expressions
- Debugging and Tracing in C#
- Logging in C#

Using Encryption and Managing Assemblies

- Using the RSA Asymmetric Algorithm

Here's what you get

45	45	01:15
LIVE LABS	VIDEO TUTORIALS	HOURS

13. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.

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