

uCertify

Course Outline

**MTA: Software Development
Fundamentals (Course & Lab)**



03 Jul 2020



Lesson



Practice test



Lab

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1. Course Objective

Get certified for the Microsoft MTA 98-361 certification exam with the MTA: Software Development Fundamentals 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 course and lab cover MTA 98-361 exam objectives and provide an understanding of core programming, object-oriented programming, general software development, web applications, desktop applications, and databases.

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.

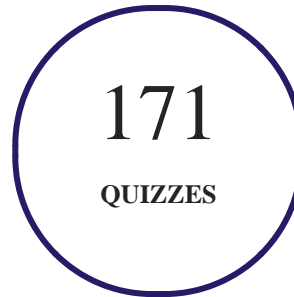
3. Exercises

There is no limit to the number of times learners can attempt these. Exercises come with detailed remediation, which ensures that learners are confident on the topic before proceeding.

270
EXERCISES

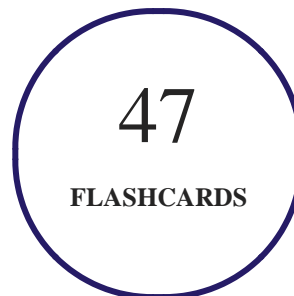
4. Quizzes

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.



5. 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.



6. 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.



7. 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.

8. 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.

9. 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 assignments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

10. 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

11. 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: Understanding Core Programming

- Understand computer storage and data types
- Understand computer decision structures

- Identify the appropriate method for handling repetition
- Understand error handling

Chapter 2: Understanding Object-Oriented Programming

- Understand the fundamentals of classes
- Understand inheritance
- Understand polymorphism
- Understand encapsulation

Chapter 3: Understanding General Software Development

- Understand Application Life Cycle Management
- Interpret application specifications
- Understand algorithms and data structures

Chapter 4: Understanding Web Applications

- Understand Web page development
- Understand Microsoft ASP.NET Web application development
- Understand Web hosting
- Understand Web services

Chapter 5: Understanding Desktop Applications

- Understand Windows Forms applications
- Understand console-based applications
- Understand Windows Services

Chapter 6: Understanding Database Management System

- Understand relational database management systems
- Understand database query methods
- Understand database connection methods

Videos and How To

uCertify course includes videos to help understand concepts. It also includes How Tos that help learners in accomplishing certain tasks.

15
VIDEOS

17
MINUTES

12. Practice Test

uCertify provides full length practice tests. These tests closely follow the exam objectives and are

designed to simulate real exam conditions. Each course has a number of test sets consisting of hundreds of items to ensure that learners are prepared for the certification exam.

Here's what you get

15

PRE-ASSESSMENTS QUESTIONS

34

POST-ASSESSMENTS QUESTIONS

Features

Full Remediation

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.

Learn, Test and Review Mode

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.

13. Performance Based Labs

uCertify's performance-based labs are Live Labs. Learn the real world skills using Live Labs.

uCertify Labs are cloud-based, device-enabled and can be easily integrated with an LMS. Features of uCertify labs:

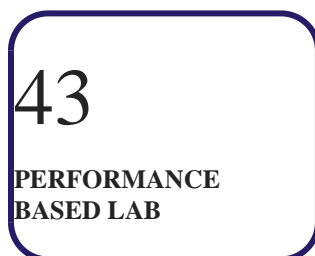
- Provide hands-on experience in a safe, online environment
- Labs simulate real world, hardware, software & CLI environment
- Flexible and inexpensive alternative to physical Labs
- Comes with well-organized component library for every task
- Highly interactive - learn by doing
- Explanations and remediation available
- Videos on how to perform

Lab Tasks

- Getting Started with Visual Studio
- Using the if Statement
- Using the if-else Statement
- Using the switch Statement
- Using the Ternary Operator
- Using the while Loop
- Using the do-while Loop
- Using the for Loop
- Using the foreach Loop
- Using the Recursive Method
- Using Error Handling
- Creating an Object
- Creating a Class
- Creating an Abstract Class
- Using Polymorphism
- Using Encapsulation
- Inserting Elements into Arrays
- Deleting an Element from an Array
- Searching an Element in an Array

- Implementing a Single Link List
- Using Bubble Sort
- Using a Queue
- Creating an HTML page
- Using a Cascading Style Sheet
- Creating ASP.NET Web Forms
- Creating a Web Deployment Package
- Deploying Web Deployment Package in IIS Server
- Creating a Web Service
- Creating a Windows Form
- Creating a Windows Store App
- Creating Packages
- Finding a List and Configuring a Windows Service
- Creating an ER diagram
- Creating a Table
- Inserting Values into a Table
- Updating a Table
- Deleting a Row from a Table
- Retrieving the Data from a Table
- Retrieving the Distinct Rows from a Table
- Retrieving the Data Using the AND Operator
- Retrieving the Sorted Data Using the ORDER BY Clause
- Creating a Stored Procedure
- Connecting to a Database

Here's what you get



14. 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.

Have Any Query? We Are Happy To Help!

GET IN TOUCH:

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■ www.uCertify.com