uCertify

Course Outline

Certified Internet of Things Practitioner (CIoTP)



28 Mar 2024

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   Chapter 2: Planning an IoT Implementation

   Chapter 3: Constructing and Programming an IoT Device

   Chapter 4: Communicating with an IoT Device

   Chapter 5: Processing IoT Data

   Chapter 6: Managing Risks on IoT Projects

   Chapter 7: Undertaking an IoT Project

   Chapter 8: Mapping CertNexus Certified Internet of Things Practitioner (CIoTP)

   Videos and How To
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1. Course Objective

Gain hands-on experience to pass the ITP-110 certification exam with the Certified Internet of Things Practitioner (CIoTP) course and lab.The lab is cloud-based, device-enabled, and can easily be integrated with an LMS. The IoT certification course covers the ITP-110 exam objectives and teaches students how to work with IoT ecosystems, security, privacy, and safety, IoT system development life cycle, and the impact of IoT.

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.

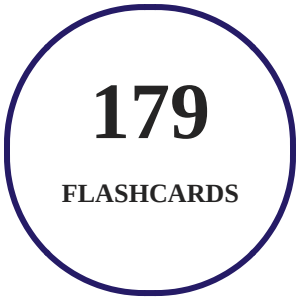
3. Quizzes

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

- Course Description
- How to Use This Course
- Course-Specific Technical Requirements

Chapter 2: Planning an IoT Implementation

- Topic A: Select a General Architecture for an IoT Project
- Topic B: Identify the Benefits and Challenges of IoT
- Summary

Chapter 3: Constructing and Programming an IoT Device

- Topic A: Select and Configure a Processing Unit
- Topic B: Select a Microcontroller Power Source
- Topic C: Use a Software Development Kit to Program an IoT Device
- Summary

Chapter 4: Communicating with an IoT Device

- Topic A: Communicate Using Wired Connections
- Topic B: Communicate Using Wireless Connections
- Topic C: Communicate Using Internet Protocols
- Summary

Chapter 5: Processing IoT Data

- Topic A: Process IoT Device Input and Output
- Topic B: Process Data in the Cloud
- Topic C: Provide M2M Communication
- Summary

Chapter 6: Managing Risks on IoT Projects

- Topic A: Identify IoT Security and Privacy Risks
- Topic B: Manage IoT Security and Privacy Risks
- Topic C: Manage IoT Safety Risks
- Summary

Chapter 7: Undertaking an IoT Project

- Topic A: Identify Real World Applications for IoT
- Topic B: Follow the IoT Development Lifecycle
- Summary

Chapter 8: Mapping CertNexus Certified Internet of Things Practitioner (CIoTP)

11.  Practice Test

Here's what you get

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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

Constructing and Programming an IoT Device

- Attaching a Microcontroller Development Board to the CPU Using USB Cables

Communicating with an IoT Device

- Getting TCP Settings
- Getting UDP Settings

Processing IoT Data

- Installing Components on the Breadboard

Managing Risks on IoT Projects

- Conducting a DoS Attack Using a SYN Flood
- Identifying Virus Threats
- Exploiting a Website Using SQL Injection
- Defending against IP Spoofing
- Searching Vulnerability Using Metasploit
- Performing a DDoS Attack Using cmd
- Performing ARP Spoofing
- Exploiting LDAP-based Authentication
- Attacking a Website Using XSS Injection

Here's what you get

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LIVE LABS

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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