

uCertify

Course Outline

Google Cloud Certified Associate Cloud Engineer



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Here's what you get

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Here's what you get

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1. Course Objective

Google Cloud Certified Associate Cloud Engineer course covers the skills needed to deploy applications, monitor operations, and manage enterprise solutions on the Google Cloud Platform. Master cloud architecture, storage solutions, operations, security, networking, pricing, and support resources. Gain hands-on experience through guided labs using real Google Cloud environments. Learn best practices for planning, designing, and managing secure cloud solution architectures. The course helps you validate your expertise in deploying applications, managing cloud operations, and architecting secure Google Cloud environments.

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.

125
EXERCISES

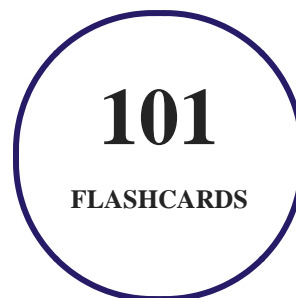
4. Quiz

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. 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

- What Does This Course Cover?
- Exam Objectives

Chapter 2: Overview of Google Cloud

- Types of Cloud Services
- Cloud Computing vs. Data Center Computing
- Summary
- Exam Essentials

Chapter 3: Google Cloud Computing Services

- Computing Components of Google Cloud

- Storage Components of Google Cloud
- Networking Components of Google Cloud
- Additional Components of Google Cloud
- Summary
- Exam Essentials

Chapter 4: Projects, Service Accounts, and Billing

- How Google Cloud Organizes Projects and Accounts
- Roles and Identities
- Service Accounts
- Billing
- Enabling APIs
- Summary
- Exam Essentials

Chapter 5: Introduction to Computing in Google Cloud

- Compute Engine
- App Engine

- Kubernetes Engine
- Cloud Run
- Cloud Functions
- Summary
- Exam Essentials

Chapter 6: Computing with Compute Engine Virtual Machines

- Creating and Configuring Virtual Machines with the Console
- Creating and Configuring Virtual Machines with Cloud SDK
- Basic Virtual Machine Management
- Guidelines for Planning, Deploying, and Managing Virtual Machines
- Summary
- Exam Essentials

Chapter 7: Managing Virtual Machines

- Managing Single Virtual Machine Instances
- Introduction to Instance Groups
- Guidelines for Managing Virtual Machines
- Summary

- Exam Essentials

Chapter 8: Computing with Kubernetes

- Introduction to Kubernetes Engine
- Deploying Kubernetes Clusters
- Deploying Application Pods
- Monitoring Kubernetes
- Summary
- Exam Essentials

Chapter 9: Managing Standard Mode Kubernetes Clusters

- Viewing the Status of a Kubernetes Cluster
- Adding, Modifying, and Removing Nodes
- Adding, Modifying, and Removing Pods
- Adding, Modifying, and Removing Services
- Creating Repositories in the Artifact Registry
- Summary
- Exam Essentials

Chapter 10: Computing with Cloud Run and App Engine

- Overview of Cloud Run
- Creating a Cloud Run Service
- Creating a Cloud Run Job
- App Engine Components
- Deploying an App Engine Application
- Scaling App Engine Applications
- Splitting Traffic Between App Engine Versions
- Summary
- Exam Essentials

Chapter 11: Computing with Cloud Functions

- Introduction to Cloud Functions
- Cloud Functions Receiving Events from Cloud Storage
- Cloud Functions Receiving Events from Pub/Sub
- Summary
- Exam Essentials

Chapter 12: Planning Storage in the Cloud

- Types of Storage Systems
- Storage Data Models
- Choosing a Storage Solution: Guidelines to Consider
- Summary
- Exam Essentials

Chapter 13: Deploying Storage in Google Cloud

- Deploying and Managing Cloud SQL
- Deploying and Managing Firestore
- Deploying and Managing BigQuery
- Deploying and Managing Cloud Spanner
- Deploying and Managing Cloud Pub/Sub
- Deploying and Managing Cloud Bigtable
- Deploying and Managing Cloud Dataproc
- Managing Cloud Storage
- Summary
- Exam Essentials

Chapter 14: Loading Data into Storage

- Loading and Moving Data to Cloud Storage
- Importing and Exporting Data
- Streaming Data to Cloud Pub/Sub
- Summary
- Exam Essentials

Chapter 15: Networking in the Cloud: Virtual Private Clouds and Virtual Private Networks

- Creating a Virtual Private Cloud with Subnets
- Deploying Compute Engine with a Custom Network
- Creating Firewall Rules for a Virtual Private Cloud
- Creating a Virtual Private Network
- Summary
- Exam Essentials

Chapter 16: Networking in the Cloud: DNS, Load Balancing, Google Private Access, and IP Addressing

- Configuring Cloud DNS
- Configuring Load Balancers

- Google Private Access
- Managing IP Addresses
- Summary
- Exam Essentials

Chapter 17: Deploying Applications with Cloud Marketplace and Cloud Foundation Toolkit

- Deploying a Solution Using Cloud Marketplace
- Building Infrastructure Using the Cloud Foundation Toolkit
- Summary
- Exam Essentials

Chapter 18: Configuring Access and Security

- Managing Identity and Access Management
- Managing Service Accounts
- Summary
- Exam Essentials

Chapter 19: Monitoring, Logging, and Cost Estimating

- Cloud Monitoring

- Cloud Logging
- Using Cloud Trace and Google Cloud Status
- Using the Pricing Calculator
- Summary
- Exam Essentials

11. Practice Test

Here's what you get

2

FULL LENGTH TESTS

50

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

Google Cloud Computing Services

- Creating a Filestore Instance

Introduction to Computing in Google Cloud

- Creating a VM Instance
- ?Creating a Service in Cloud Run

Managing Virtual Machines

- Creating a Snapshot
- Creating an Instance Group

Deploying Storage in Google Cloud

- Initializing Data Systems with Cloud Spanner
- Creating an Instance in Bigtable
- Creating a Workflow Template in Dataproc

Loading Data into Storage

- Creating and Moving Data Files

Networking in the Cloud: Virtual Private Clouds and Virtual Private Networks

- Creating a VPC Network
- Creating a Cloud Router
- Creating a VPC Network Peering Connection
- Creating a VPN Connection

Networking in the Cloud: DNS, Load Balancing, Google Private Access, and IP Addressing

- Creating a Load Balancer

Deploying Applications with Cloud Marketplace and Cloud Foundation Toolkit

- Creating a Deployment Using Deployment Manager

Here's what you get

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LIVE LABS

15

VIDEO TUTORIALS

16


MINUTES

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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