

IT 0171 - COMPTIA CLOUD+ COMPUTING CONCEPTS AND PRACTICES

Catalog Description

Prerequisite: Completion of IT 105 with grade of "C" or better
 Advisory: Completion of IT 110 and IT 115 with grades of "C" or better
 Hours: 72 (54 lecture, 18 laboratory)

Description: Introduces students to cloud management concepts including cloud architecture and design, cloud security, deployment, operations and support, and cloud troubleshooting. This course helps prepare students for the CompTIA Cloud+ CV0-003 exam and for entry into the workforce in the Cloud market. (CSU)

Course Student Learning Outcomes

- CSLO #1: Evaluate and recommend options to solve business problems using cloud computing technologies.
- CSLO #2: Effectively employ cloud computing technology concepts and terminology in professional communication.
- CSLO #3: Demonstrate marketable cloud computing technology career skills.

Effective Term

Fall 2024

Course Type

Credit - Degree-applicable

Contact Hours

72

Outside of Class Hours

90

Total Student Learning Hours

162

Course Objectives

The student shall demonstrate through written exams and lab activities the ability to:

Lecture Objectives

1. Describe how to create and validate a cloud deployment
2. Define how to verify system requirements
3. Explain how to manage User Identities and Roles
4. Analyze Security Compliance
5. Define Cloud Maintenance Practices
6. Explain Troubleshooting Cloud Capacity Issues Processes

Lab Objectives

7. Demonstrate adding and removing Cloud Resources
8. Configure Security Patch Plans
9. Establish Access Control Policies
10. Document User Accounts and Roles

General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

Articulation Information

- CSU Transferable

Methods of Evaluation

- Classroom Discussions
 - Example: Sample: In your own words describe the processes needed to create a new User account and associate it with the correct Roles. Explain why Role association is important. When you have finished your post read what other students posted and reply to at least 3 other student posts.
- Objective Examinations
 - Example: Where can MFA tokens be obtained? (Choose two.) A. Python app B. Smartphone app C. Automation systems D. Keyfob E. Cloud vendor management dashboard
- Skill Demonstrations
 - Example: Using the lab environment provided create a new VM running Windows 10, name it Client 1 and attach it to the 10.10.10.2 Network. When you have finished capture a screen shot of the properties for the Client 1 and submit for grading.

Repeatable

No

Methods of Instruction

- Laboratory
- Lecture/Discussion
- Distance Learning

Lab:

1. Instructor will demonstrate how to establish user accounts and set roles in a cloud environment then provide students with lab instructions to repeat the process in a virtual environment.

Lecture:

1. The instructor will review content with students that explains how to Analyze Security Compliance in a cloud environment. Students will participate in an online discussion board regarding the topic.

Distance Learning

1. Instructor will provide learning materials that cover how Analyze Security Compliance via the LMS. Students will complete lab

activities related to this topic to demonstrate an understanding of the topic.

Typical Out of Class Assignments

Reading Assignments

Students will be assigned weekly reading from the textbook and required to complete the end of chapter review questions. Example: Read chapter 6 - Disaster Recovery, Business Continuity, and Ongoing Maintenance and complete the Review questions at the end of the chapter. Submit a Word document with the question # and answer for all 20 questions.

Writing, Problem Solving or Performance

Given a scenario students will choose the correct network configurations, protocols and services to secure a network in a cloud environment.

Example: After analyzing a web server's logs, a systems administrator sees that users are connecting to the company's application through HTTP instead of HTTPS. The administrator then configures a redirect from HTTP to HTTPS on the web server, and the application responds with a connection time-out message. Which of the following should the administrator verify NEXT? A. The TLS certificate B. The firewall rules C. The concurrent connection limit D. The folder permissions

Other (Term projects, research papers, portfolios, etc.)

Required Materials

- CompTIA Cloud+ Study Guide
 - Author: Ben Piper
 - Publisher: Wiley / Sybex
 - Publication Date: Sept 2021
 - Text Edition: 3rd
 - Classic Textbook?: No
 - OER Link:
 - OER: No

Other materials and-or supplies required of students that contribute to the cost of the course.