South Central College

COMP 2456 Cloud Technologies and Services

Course Outcome Summary

Course Information

Description The Cloud Technologies and Services (CTS) course educates students about cloud deployment and service models, cloud infrastructure, and the key considerations in migrating to cloud computing. The course covers technologies required to build classic (traditional), virtualized, and public / private cloud data center environments. These technologies include storage, networking, desktop and application virtualization. Fundamental models such as Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS), Infrastructure-as-a-Service (IaaS) are explored. Additional areas of focus are backup/recovery, business continuity, security, and management. Students will learn about the key considerations and steps involved in transitioning from the current state of a data center to a cloud computing environment. Upon completing this course, students will have the knowledge to make informed decisions about migrating to cloud infrastructure and choosing the best deployment model for an organization.
(Prerequisite: COMP 1200 Hardware and Software Essentials)

Total Credits 4

Total Hours 64

Types of Instruction

Instruction Type	Credits/Hours
Lecture / Active learning	4/64

Pre/Corequisites

COMP 1200 Hardware and Software Essentials

Institutional Core Competencies

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

1. Explain industry-standard cloud concepts.

Course Outcome

Explain common hardware resources and features used to enable virtual environments.

9. Describe systems management.

Learning Objectives

Explain policies and procedures as they relate to a cloud environment.
Explain common performance concepts as they relate to the host and the guest.
Implement appropriate testing techniques when deploying cloud services.
Given a scenario, diagnose, remediate and optimize physical host performance.

10. Describe the Cloud security concerns and solutions.

Learning Objectives

Explain network security concepts, and best practices.
Explain storage security concepts, methods, and best practices.
Compare contrast different encryption technologies and methods.
Identify access control methods.
Implement guest and host hardening techniques.

11. Describe business continuity solutions in the Cloud.

Learning Objectives

Discuss technology options for ensuring business continuity.
Discuss mechanisms to protect potential points of failure in a VDC.
Describe approaches used for backup of Virtual Machines (VMs).
Describe VM replication and migration technologies.
Discusses options for recovering from total site failure due to a disaster.

12. Summarize Cloud migration considerations.

Learning Objectives

Discuss the considerations for migration to Cloud.
Discuss the Cloud models suitable for different categories of users.
List the considerations for choosing applications suitable for Cloud.
Discuss different phases to adopt the Cloud.

SCC Accessibility Statement

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations. North Mankato: Room B-132, (507) 389-7222; 2 ~~K~~