IT C158: CONTEMPORARY OPERATING SYSTEMS (SERVER+)

Item	Value
Curriculum Committee Approval Date	10/27/2023
Top Code	070810 - Computer Networking
Units	3 Total Units
Hours	72 Total Hours (Lecture Hours 54; Lab Hours 18)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)

Course Description

Formerly: CST C158. This course focuses on server hardware management and installation concepts widely used in the Information Technology sector. Trends and technologies of the server environment such as virtualization, data centers, software-defined networking, security risks, and network-attached storage improvements are covered. Students will learn skills for server administration and troubleshooting techniques through hands-on assignments. Helps students gain knowledge in preparation for the CompTIA Server+ certification exam. ADVISORY: IT C128. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Demonstrate the ability to configure different types of file systems.
2. Analyze the access and control methods to administer network-based hardware.
3. Perform proper patch management techniques to ensure server maintenance and device driver updates.

Course Objectives

- 1. Demonstrate how to configure a server to run on a network.
- 2. Describe how to perform proper change management techniques to ensure server maintenance.
- 3. Define regulation of access using best practices for identity and access management (IAM).

Lecture Content

Determine the role and purpose of a server Steps to update firmware on a server Steps to configure extensible firmware interfaces and boot order Configure and format a Redundant Array of Independent Disks (RAID) Partition and format a disc Configure file system types Configure a host name on a server operating system Set up a local account on a server operating system Connect your server to a network and join a domain and/or directory Enable services and use different server security components to address security concerns Establish server, swap, or pagefile optimization Install different features, roles, applications, and drivers on a server operating system Deploy images and cloning and perform scripted installs Access and control methods to administer local hardware, network-based hardware, and network-based operating systems Perform proper change management techniques to ensure server maintenance Perform proper patch management techniques to ensure server maintenance and device driver updates Configure a server to run on a network

Lab Content

Students will work with remote lab environments to complete hands-on activities. Install and configure a server operating system Apply common hardening methods to reduce vulnerabilities on a network server Implement Identity and Access Management (IAM) to regulate access across the network Perform proper patch management techniques to update a server Troubleshoot network connectivity issues

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)
- Lab (04)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

This course will utilize a combination of lecture, hands-on guided laboratory assignments, classroom/discussion student interactions, problem solving, quizzes, tests, and troubleshooting assignments to achieve the goals and objectives of this course. All instructional methods are consistent across all modalities.

Reading Assignments

Read and research the role and purpose of a server Read how to install different features, roles, applications, and drivers on a server Operating System. Research the comparison and contrast roles and requirements of a routing and remote access server.

Writing Assignments

Complete documentation of proper patch management techniques. Complete documentation of how to configure a server to run on a network.

Out-of-class Assignments

Complete hands-on lab to enable services and use different server security components to address security concerns. Complete hands-on lab to perform proper patch management techniques.

Demonstration of Critical Thinking

Students will configure a server to run on a network in a secure manner with proper patch management and following industry standards for service level agreements.

Required Writing, Problem Solving, Skills Demonstration

Skills will be demonstrated during hands-on lab exercises with skills-based configurations that are recognized as industry standard practices.

Eligible Disciplines

Computer information systems (computer network installation, microcomputer ...: Any bachelor's degree and two years of professional experience, or any associate degree and six years of professional experience. Computer information systems (computer network installation, microcomputer ...: Any bachelor's degree and two years of professional experience, or any associate degree and six years of professional experience. Computer service technology: Any bachelor's degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Lachance, Daniel. All in One CompTIA Server+ Certification Exam Guide, 2nd ed. New York: McGraw hill, 2021

Other Resources

1. Coastline Library 2. White papers, security reports, and articles are available at no charge to all students at multiple sites as recommended by the instructor.