

# IT 0115 - SERVER SYSTEMS ADMINISTRATION

## Catalog Description

Formerly known as CIS 142

Prerequisite: Completion of IT 105 with grade of "C" or better

Hours: 72 (54 lecture, 18 laboratory)

Description: Provides knowledge and skills required to build, maintain, troubleshoot and support Microsoft server OS technologies.

Covers environmental issues, disaster recovery, physical/software security procedures, industry terminology and concepts, server roles, specializations, and interaction within the overall computing environment. (C-ID ITIS 155) (CSU)

## Course Student Learning Outcomes

- CSLO #1: Research, analyze and evaluate information to solve business problems using computer technology concepts and software.
- CSLO #2: Design and produce computer technology solutions incorporating current trends, security, and best practices.
- CSLO #3: Employ computer technology concepts and terminology in professional communication.
- CSLO #4: Demonstrate marketable computer technology career skills.7++++

## Effective Term

Fall 2023

## Course Type

Credit - Degree-applicable

## Contact Hours

72

## Outside of Class Hours

90

## Total Student Learning Hours

162

## Course Objectives

Lecture Objectives:

1. Discuss and perform server hardware installation and management
2. Discuss and perform server administration
3. Discuss and perform servers' security and disaster recovery
4. Discuss and perform server hardware and OS troubleshooting
5. Install, configure, manage, and maintain Windows Server 2019 OS
6. Install, configure, manage, and maintain Linux Server OS
7. Maintain Windows Server and Linux OS in an Enterprise environment
8. Discuss and perform Disaster Recovery in a Windows and Linux environment.
9. Discuss Open-Source software and licensing
10. Discuss and perform actions with the Linux command line and Windows PowerShell

11. Discuss security and file permissions in a Windows and Linux environment
12. Discuss and perform bash scripting in a Linux environment
13. Discuss and perform PowerShell scripting in a Windows environment
14. Discuss how to manage and deploy a Server OS in a cloud environment

Laboratory Objectives:

1. Access and configure network protocols via command line or from an application.
2. Implement various installation options for Windows and Linux Server OS.
3. Manage disk and file management systems on Windows and Linux environment
4. Configure system security settings on Windows and Linux Server OS.
5. Configure system and data recovery on Windows and Linux Server OS.
6. Configure system administration settings on Windows and Linux Server OS.
7. Configure OS administration settings in a cloud environment.

## 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

- Objective Examinations
  - Example: Based upon course readings and class discussions relating to OS Installation and configuration, students would be required to take a quiz relating to chapter content, and to explain issues pertaining pre and post installation tasks. Example: In your own words (no copy/paste allowed) identify pre installation task that need to be performed prior to installing the OS. Instructor will grade based on level of understanding shown in the response.
- Problem Solving Examinations
  - Example: Students will be provided with a written scenario, outlining a company's current Server OS installation and configuration policy, and asked to critic, in writing, the policy, identifying key point in the policy that are acceptable or need to be modified. Key points in terms of evaluation include providing through research information that justifies their analysis of the OS installation policy and includes alternatives relative to what should or should not be implemented. A grading rubric will be provided.
- Projects
  - Example: Given a specific scenario, students would be required to prepare an "incident response plan (IRP)." Student performance would be based upon a rubric designed to incorporate both the requirements of an IRP, as identified course readings, and the clearness of plan response instructions
- Skill Demonstrations
  - Example: Students will be provided lab assignments based on the weekly topic and required to complete the tasks outlined. Example: Student will configure hostname, IP addresses, user accounts and driver installation. Students will capture images to show the process and submit for grading. Grading will be based

on a complete set of images with proper notations as described in the instructions. Pass/Fail grading.

## Repeatable

No

## Methods of Instruction

- Laboratory
- Lecture/Discussion
- Distance Learning

Lab:

1. Instructor will guide students through hands-on lab exercise to install, configure and manage Windows and Linux Operating System. (Objective 2)

Lecture:

1. Students will read weekly assignments related to Operating System installation and configuration. The instructor will lead a review discussion on the topics covered. (Objective 1)

Distance Learning

1. Students will be provided with a written scenario, outlining a company's current Operating System configuration standard and policies. Students will analyze the company policy in conjunction with compliance guidelines to ensure systems are configured to a standard. (Objective 1)

## Typical Out of Class Assignments

### Reading Assignments

1. Students read from the course text. For example, students read the textbook chapter on Server Hardware and answer end of chapter questions. 2. Students perform web-based hardware configuration on HPE, DELL and IBM websites and report back on their findings.

### Writing, Problem Solving or Performance

Example 1: Students will utilize built in Operating System troubleshooting and performance optimization tools to remediate technical issues that may arise Example 2: Detail the specific differences between Windows and Linux Operating Systems. Students will also discuss use case between the two operating systems by analyzing their differences.

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

### Required Materials

- CompTIA Server+ Certification All-in-One Exam Guide (Exam SK0-005)
  - Author: Daniel Lachance
  - Publisher: McGraw Hill
  - Publication Date: 2021
  - Text Edition: 2nd
  - Classic Textbook?: No
  - OER Link:
  - OER:

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