South Central College

COMP 2462 Microsoft Administration

Course Outcome Summary

Course Information

Description	This course provides students with a comprehensive understanding of Microsoft Windows Server and prepares them to perform server administration. The class is based on the requirements of the Microsoft Certified Professional (MCP) credential and teaches the skills to successfully implement, manage, and troubleshoot Microsoft-Windows-based operating environments. Students apply their knowledge through hands-on projects and case study assignments, and learn how to install and administer Active Directory services and manage Active Directory objects. In addition, they learn how to implement and configure core services such as Networking, Storage, Active Directory Domain Services (ADDS), Group Policy, File and Print services, and Hyper-V. Finally, students learn how to install and administer network protocols and services such as virtual private networking, Routing and Remote Access Service, DHCP, and DNS. (Prerequisites: COMP 1360)
Total Credits	4
Total Hours	64

Types of Instruction

Instruction Type	Credits/Hours
Lecture	4/64

Pre/Corequisites

COMP 1360

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. **Prepare to install Microsoft Server**

   Learning Objectives
   Plan for a server installation
   Plan for server roles

Plan for a server upgrade
Determine hardware requirements using the Windows Compatibility List

2.   Install windows servers

Learning Objectives
Optimize resource utilization by using Features on Demand
Migrate roles from previous versions of Windows Server
Configure server roles
Plan for a server upgrade

3.   Configure windows server

Learning Objectives
Add and remove features in offline images
Deploy roles on remote servers
Convert Server Core to/from full GUI
Configure services
Configure NIC teaming
Delegate administration

4.   Configure local server storage

Learning Objectives
Design storage spaces
Configure basic and dynamic disks
Configure MBR and GPT disks
Manage volumes
Create and mount virtual hard disks (VHDs)
Configure storage pools and disk pools

5.   Configure File and Share Access

Learning Objectives
Create and configure shares
Configure share permissions
Configure offline files
Configure NTFS permissions
Configure access-based enumeration (ABE)
Configure Volume Shadow Copy Service (VSS)
Configure NTFS quotas

6.   Configure Print and Document Services

Learning Objectives
Configure the Easy Print print driver
Configure Enterprise Print Management
Configure drivers
Configure printer pooling
Configure print priorities
Configure printer permissions

7.   Configure Servers for Remote Management

Learning Objectives
Configure WinRM
Configure down-level server management
Configure servers for day-to-day management tasks
Configure multi-server management
Configure Server Core
Configure Windows Firewall

8.   Create and Configure Virtual Machine Settings

Learning Objectives
Configure dynamic memory

Configure smart paging
Configure Resource Metering
Configure guest integration services

9.   **Create and Configure Virtual Machine Storage**

Learning Objectives
Explain the various storage options that Hyper-V provides
Create virtual disks in Hyper-V Manager
Create pass-through disks
Create checkpoints of Hyper-V virtual machines

10.   **Create and Configure Virtual Networks**

Learning Objectives
Implement Hyper-V Network Virtualization
Configure Hyper-V virtual switches
Optimize network performance
Configure MAC addresses
Configure network isolation
Configure synthetic and legacy virtual network adapters

11.   **Deploy the DHCP Service**

Learning Objectives
Create and configure scopes
Configure a DHCP reservation
Configure DHCP options
Configure client and server for PXE boot
Configure DHCP relay agent
Authorize DHCP server

12.   **Deploy and Configure the DNS Service**

Learning Objectives
Configure Active Directory integration of primary zones
Configure forwarders
Configure Root Hints
Manage DNS cache
Create A and PTR resource records

13.   **Install Domain Controllers**

Learning Objectives
Add or remove a domain controller from a domain
Upgrade a domain controller
Install Active Directory Domain Services (AD DS) on a Server Core installation
Install a domain controller from Install from Media (IFM)
Resolve DNS SRV record registration issues
Configure a global catalog server

14.   **Create and Manage Active Directory Users and Computers**

Learning Objectives
Automate the creation of Active Directory accounts
Create, configure, and delete users and computers
Configure templates
Perform bulk Active Directory operations
Configure user rights
Manage inactive and disabled accounts

15.   **Create and Manage Active Directory Groups and Organizational Units**

Learning Objectives
Configure group nesting
Convert groups including security, distribution, universal, domain local, and domain global

Manage group membership using Group Policy
Delegate the creation and management of Active Directory objects
Manage default Active Directory containers
Create, copy, configure, and delete groups and OUs

16.   Create Group Policy Objects

Learning Objectives
Configure a Group Policy Central Store
Manage starter GPOs
Configure GPO links
Configure multiple local group policies
Configure security filtering

17.   Configure Security Policies

Learning Objectives
Configure User Rights Assignment
Configure Security Options settings
Configure Security templates
Configure Audit Policy
Configure Local Users and Groups
Configure User Account Control (UAC)

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;   Faribault: Room A-116, (507) 332-7222.

Additional information and forms can be found at: www.southcentral.edu/disability

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