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

<table>
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<tr>
<th>Instruction Type</th>
<th>Credits/Hours</th>
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<td>Lecture</td>
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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](http://www.southcentral.edu/disability)

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