

Master Syllabus

CIS 2510 - Microsoft Windows Server Operating System

Division: Business and Public Services

Department: Computer Information Systems

Credit Hour Total: 3.0

Lecture Hrs: 3.0

Prerequisite(s): AND CIS 1130 CIS 1107 OR CIS 1411

Date Revised: May 2014

Course Description:

Intermediate and advanced aspects of the administration and support functions of a Windows Server administrator. Outcomes include installation and setup of the current Windows Server operating system, setup and administration of a client server network and in-depth knowledge of the current Windows Server operating system.

General Education Outcomes:

- ▣ Critical Thinking/Problem Solving Competency
- ▣ Computer Literacy Competency
- ▣ Oral Communication Competency
- ▣ Written Communication Competency

Course Outcomes:

Install and configure Active Directory

Install Domain Controllers, including Server Core installations, to manage domain users, groups and computers through Group Policy Objects (GPOs).

Assessment Method: Locally developed exams
Performance Criteria:

Students will perform at a 75% or higher level on a locally developed exam.

Assessment Method: Simulations
Performance Criteria:

Students will perform at a 75% or higher level on a locally developed rubric.

Server deployment in network roles

Plan for server deployment to provide network infrastructure services, file, and application services including permissions, quotas, replication and availability.

Assessment Method: Locally developed exams
Performance Criteria:

Students will perform at a 75% or higher level on a locally developed exam.

Assessment Method: Simulations
Performance Criteria:

Students will perform at a 75% or higher level on a locally developed rubric.

Windows Server OS

Configure important features of the current Windows Server operating system.

Assessment Method: Locally developed exams
Performance Criteria:

Students will perform at a 75% or higher level on a locally developed exam.

Assessment Method: Simulations
Performance Criteria:

Students will perform at a 75% or higher level on a locally developed rubric.

Windows server management

Create and plan strategies for server management including monitoring and troubleshooting of management issues and for delegating administrative tasks effectively to improve server management.

Assessment Method: Locally developed exams
Performance Criteria:

Students will perform at a 75% or higher level on a locally developed exam.

Assessment Method: Simulations
Performance Criteria:

Students will perform at a 75% or higher level on a locally developed rubric.

Outline:

1 Install and configure Windows Server 2012.

- 1.1 Install servers including server roles, server upgrades, server core installation and migration of roles from previous versions.
- 1.2 Configure servers including server core, add and remove features in offline images, deploy roles in remote servers and convert server core to full GUI.
- 1.3 Configure local storage including basic and dynamic disks, MBR and GUID partition table disks, VHDs and disk pools.

2. Configure server roles and features.

- 2.1 Configure file and share access including share permissions, offline files, NTFS permissions, Volume Shadow Copy Service and NTFS quotas.
- 2.2 Configure print and document services including drivers, printer pooling, print priorities and print permissions.
- 2.3 Configure servers for remote management including down level server management, server core, windows firewall and non-domain servers.

3. Configure Virtual Machines using Hyper-V.

- 3.1 Create and configure virtual machine settings.
- 3.2 Create and configure virtual machine storage including VHDs and VHDX, virtual fibre channel adapters and storage Quality of Storage.
- 3.3 Create and configure virtual networks including virtual switches, MAC addresses, network isolation and NIC teaming.

4. Deploy and configure core network services.

- 4.1 Configure IPv4 and IPv6 addressing including subnetting, supernetting, and interoperability between IPv4 and IPv6 using various tunnelling protocols.
- 4.2 Deploy and configure DHCP including scopes, reservations, relay agents and various server and scope level options.
- 4.3 Deploy and configure DNS services including primary and secondary zones, forwarders, root hints and various record types.

5. Install and administer Active Directory.

- 5.1 Install Domain Controllers including AD Domain Services, server core installation and global catalog servers.
- 5.2 Create and manage Active Directory users and computers using automated methods.
- 5.3 Create and manage Active Directory groups and organizational units (OUs) including various groups types and scopes.

6. Create and manage Group Policy Objects (GPOs).

- 6.1 Create GPOs including starter GPOs, GPO links and multiple local group policies.
- 6.2 Configure security policies including security options, templates, audit policies and user account control.
- 6.3 Configure application restriction policies including AppLocker rules and software restriction policies.
- 6.4 Configure Windows firewall including multiple profiles and settings to allow or deny applications, scopes, ports and users.