

## 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

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#### 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 Ceate 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.