Installing and Configuring Windows Server 2012 (ITNW 1301)

Credit: 3 semester credit hours (2 hours lecture, 4 hours lab)

Prerequisite/Co-requisite: None

Course Description

This course will validate the initial implementation and configuration of the Windows Server 2012 core services, such as Active Directory and the networking services. This course along with the remaining two courses will collectively validate the skills and knowledge necessary for implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2012 environment.

Required Textbook and Materials

1. *70-410 Installing and Configuring Windows Server 2012 with Lab Manual Set,* Microsoft Official Academic Course, Wiley, 2013.

    a. ISBN number for print book is 978-1-118-65617-4

    b. ISBN number for E-book is 978-1-118-62761-7 (verify lab book)

    c. ISBN number for lab manual E-book: 978-1-118-62835-5

    d. ISBN number for CourseSmart eBook: 978-1-118-62819-5 (text only)

2. Computer Networking and Troubleshooting Technology students are required to have one portable external Hard Drive with a capacity of 500GB or larger to be used for the duration of the time to complete their respective degree.

Course Objectives

Upon completion of this course, the student will be able to:

1. Install and configure servers.

2. Configure server roles and features.

3. Configure Hyper-V.

4. Deploy and configure core network services.

5. Install and administer Active Directory.

6. Create and manage Group Policy.

Course Outline

A. Installing Servers
   1. Selecting a Windows Server 2012 Edition
   2. Installing Windows Server 2012
   3. Choosing Installation Options

   4. Upgrading Servers
   5. Migrating Roles

B. Configuring Servers

Approved 1/2014

1. Completing Post-Installation Tasks
2. Using Roles, Features, and Services
3. Using Server Manager
4. Delegating Server Administration

C. Configuring Local Storage
   1. Planning Server Storage
   2. Understanding Windows Disk Settings
   3. Working with Disks

D. Configuring File and Share Access
   1. Designing a File-Sharing Strategy
   2. Creating Folder Shares
   3. Assigning Permissions
   4. Configuring Volume Shadow Copies
   5. Configuring NTFS Quotas

E. Configuring Print and Document Services
   1. Deploying a Print Server
   2. Using the Print and Document Services Role

F. Configuring Servers for Remote Management
   1. Using Server Manager for Remote Management
   2. Using Remote Server Administration Tools
   3. Using Windows PowerShell Web Access
   4. Working with Remote Servers

G. Creating and Configuring Virtual Machine Settings
   1. Virtualizing Servers
   2. Installing Hyper-V
   3. Using Hyper-V Manager
   4. Configuring Resource Metering

H. Creating and Configuring Virtual Machine Storage
   1. Working with Virtual Disks
   2. Connecting to a SAN

I. Creating and Configuring Virtual Networks

1. Using Virtual Networks

J. Configuring IPv4 and IPv6 Addressing
   1. Understanding IPv4 Addressing
   2. Understanding IPv6 Addressing
   3. Planning an IP Transition

K. Deploying and Configuring the DHCP Service
   1. Understanding DHCP
   2. Designing a DHCP Infrastructure
   3. Deploying a DHCP Server
   4. Deploying a DHCP Relay Agent

L. Deploying and Configuring the DNS Service
   1. Understanding the DNS Architecture
   2. Designing a DNS Deployment
   3. Creating Internet Domains
   4. Creating Internal Domains
   5. Deploying a DNS Server

M. Installing Domain Controllers
   1. Introducing Active Directory
   2. Deploying Active Directory Domain Services

N. Creating and Managing Active Directory Users and Computers
   1. Creating User Objects
   2. Creating Computer Objects
   3. Managing Active Directory Objects

O. Creating and Managing Active Directory Groups and Organizational Units
   1. Designing an Internal Domain Structure
   2. Working with Organizational Units
   3. Working with Groups

P. Creating Group Policy Objects
   1. Introducing Group Policy
   2. Using the Group Policy Management Console
   3. Creating Multiple Local GPOs

Q. Configuring Security Policies

1. Configuring Security Policies Using Group Policy
2. Configuring Local Users and Groups
3. Configuring User Account Control

R. Configuring Application Restricted Policies
   1. Installing Software with Group Policy
   2. Configuring Software Restriction Policies
   3. Using AppLocker

S. Configuring Windows Firewall
   1. Building Firewall
   2. Using the Windows Firewall Control Panel
   3. Using the Windows Firewall with Advanced Security Console

Grade Scale

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

Course Evaluation
Final grades will be calculated according to the following criteria:

1. Labs	25%
2. Study Guides	10%
3. Chapter Tests	35%
4. Final Exam	30%

Course Requirements
1. Demonstrate proficiency through hands-on labs as assigned.
2. Completion of Study Guides as assigned.

Course Policies
1. No food, drinks, or use of tobacco products in class.
2. Beepers, telephones, headphones, and any other electronic devices must be turned off while in class.
3. Do not bring children to class.
4. No late assignments will be accepted.
5. Certification. If a student passes the certification test that is associated with this class, you will receive an "A" on the final exam and credit for 25% of your labs. If you have missed a previous test, you must still take the final exam to substitute for that grade.
6. Attendance Policy. Three absences are allowed. If a student is tardy to class or departs early three (3) times, it will be equal to one (1) absence. Each absence beyond three absences will result in a 2 point deduction from your final grade.

7. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an 'F' in the course.

8. Labs. Due dates will be announced by the instructor.

9. Tools. Return all tools and/or software to their designated place.

10. A grade of 'C' or better must be earned in this course for credit toward degree requirement.

11. Additional class policies as defined by the individual course instructor.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

Course Schedule

Week of	Topic	Reference
Week 1	Syllabus and policies	
	Course Introduction	
	Introduction to Virtual Labs	
	Chapter 1: Installing Servers	pp. 1-31
		Lab 1
Week 2	Chapter 2: Configuring Servers	pp. 32-58
		Lab 2
Week 3	Chapter 3: Configuring Local Storage	pp. 59-96
		Lab 3
Week 4	Chapter 4: Configuring File and Share	pp. 97-134
	Access	Lab 4
	Exam Chapters 1-4	Labs 1-4
Week 5	Chapter 5: Configuring Print and Document	pp. 135-168
	Services	Lab 5
	Chapter 6: Configuring Servers for Remote	pp. 169-196
	Management	Labs 6
Week 6	Chapter 7: Creating and Configuring Virtual	pp. 197-224
	Machine	Lab 7
	Chapter 8: Creating and Configuring Virtual	pp. 225-247
	Machine Storage	Lab 8
Week 7	Chapter 9: Creating and Configuring Virtual	pp. 248-266
	Networks	Lab 9
	Exam Chapters 5-9	Labs 5-9
Week 8	Chapter 10: Configuring IPv4 and IPv6	pp. 267-297

Week of	Topic	Reference
	Addressing	Lab 10
	Chapter 11: Deploying and Configuring the DHCP Service	pp. 298-332 Lab 11
Week 9	Chapter 12: Deploying and Configuring the DNS Service	pp. 333-369 Lab 12
Week 10	Exam Chapters 10-12	Labs 10-12
	Chapter 13: Installing Domain Controllers	pp. 370-404 Lab 13
Week 11	Chapter 14: Creating and Managing Active Directory Users and Computers	pp. 405-429 Lab 14
Week 12	Chapter 15: Creating and Managing Active Directory Groups and Organizational Units	pp. 430-459 Lab 15
	Chapter 16: Creating Group policy Objects	pp. 460-488 Lab 16
Week 13	Exam Chapters 13-16	Labs 13-16
	Chapter 17: Configuring Security policies	pp. 489-521 Lab 17
Week 14	Chapter 18: Configuring Application Restriction Policies	pp. 522-549 Lab 18
	Chapter 19: Configuring Windows Firewall	pp. 550-573 Lab 19
Week 15	Lab	Labs 17-19
	Exam 17-19	
Week 16	Final Exam	Comprehensive

Contact Information:

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Additional Course Policies

- Lab Grading. You must answer all questions in the assigned labs, as well as any review questions at the end of the lab. Labs are submitted through Blackboard and must be turned in on or before the due date.   5 points will be deducted for each question in the lab that is not answered and 7 points will be deducted for each review question that is not answered. If none of the questions are answered then the lab will receive a '0'. Labs that are not turned in will receive a '0'. Do not do the lab challenges or the troubleshooting labs.