Supporting Network Server Infrastructure (ITNW 1353)

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

Prerequisite/Co-requisite: None

Course Description
Installing, configuring, managing, and supporting a network infrastructure.

Required Textbook and Materials

1. *70-642: Windows Server 2008 Network Infrastructure Configuration, Package,* Microsoft Official Academic Course, Wiley, 2008.

    a. ISBN number is 978-0-470-13327-9

2. A package of #882 Scantrons and #2 pencils.

3. A portable external Hard Drive with a capacity of 200GB or larger.

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

1. Install and configure DHCP, DNS, remote access, network security using public key infrastructure. (SCANS: C1, C3, C5, C6, C7, C8, C11, C15, C16, C17, C18, C19, C20, F 1, F2, F5, F6, F7, F8, F9, F10, F11, F12, F13, F16, F17)

2. Integrate network services. (SCANS: C1, C3, C5, C6, C7, C8, C11, C15, C16, C17, C18, C19, C20, F 1, F2, F5, F6, F7, F8, F9, F10, F11, F12, F13, F16, F17)

3. Deploy operating systems using remote installation services. (SCANS: C1, C3, C5, C6, C7, C8, C11, C15, C16, C17, C18, C19, C20, F 1, F2, F5, F6, F7, F8, F9, F10, F11, F12, F13, F16, F17)

SCANS Skills and Competencies
Beginning in the late 1980's, the U.S. Department of Labor **S**ecretary's **C**ommission on **A**chieving **N**ecessary **S**kills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings **i**n *What Work Requires in Schools.* In its research, the Commission determined that "workplace know-how" consists of two elements: foundation skills and workplace competencies.

Course Outline
A. Introduction to Networking Concepts:
1. Understanding TCP/IP Addressing
2. Introducing the Domain Name System (DNS)
3. Introducing the Dynamic Host Configuration Protocol (DHCP)
4. Using the Routing and Remote Access Service (RRAS)

Approved 10/2010

5. Introducing Network Access protection (NAP)

B. Installing Microsoft Windows Server 2008
   1. Initial Configuration Tasks
   2. Adding Windows Server 2008 Features

C. Configuring and Managing the DHCP Server Role
   1. Understanding DHCP
   2. Configuring the DHCP Server Role
   3. Managing the DHCP Database

D. Configuring and Managing the DNS Server Role
   1. Understanding DNS Namespaces
   2. Configuring the Domain Name System (DNS) Service
   3. The DNS Name Resolution Process

E. Configuring Routing and Remote Access (RRAS) and Wireless Networking
   1. Configuring Routing
   2. Configuring Remote Access
   3. Configuring Wireless Access

F. Configuring File Services
   1. Planning a File Server Deployment
   2. Configuring a File Server
   3. Installing the File Services Role
   4. Using the distributed File System

G. Configuring Print Services
   1. Deploying a Print Server
   2. Using the Print Services Role

H. Maintaining and Updating Windows Server 2008
   1. Monitoring a Windows Server 2008 Network
   2. Configuring Windows Server Update Services (WSUS)

I. Securing Data Transmission and Authentication
   1. Securing Network Traffic with IPSec
   2. Configuring Network Authentication
   3. Configuring the Windows Firewall

J. Maintaining Network Health
   1. Introducing Active Directory Certificate Services
   2. Introducing Network Access Protection

K. Maintaining Windows Server 2008 File Services
   1. Configuring Shadow Copies of Shared Folders
   2. Configuring Disk Quotas
   3. Generating Storage Reports
   4. Backing Up Windows Server 2008
   5. Restoring Windows Server 2008

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	30%
2. Study Guides	10%
3. Chapter Tests	30%

2

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	
Week 2	Chapter 1: Introduction to Networking Concepts	pp. 1-16 Lab 1
Week 3	Chapter 2: Installing Microsoft Windows Server 2008	pp. 17–34 Lab 2
Week 4	Chapter 3: Configuring and Managing the DHCP Server Role	pp. 35-56 Lab 3
Week 5	Chapter 4: Configuring and Managing the DNS Server Role	pp. 57-100 Lab 4
Week 6	Chapter 5: Configuring Routing and Remote Access (RRAS) and Wireless Networking	pp. 101-125
Week 7	Chapter 5: Configuring Routing and Remote Access (RRAS) and Wireless Networking	pp. 101-125 Lab 5
Week 8	Chapter 6: Configuring File Services	pp. 126-152 Lab 6
Week 9	Chapter 7: Configuring Print Services	pp. 153-178 Lab 7
Week 10	Chapter 7: Configuring Print Services	pp. 153-178 Lab 7
Week 11	Chapter 8: Maintaining and Updating Windows Server 2008	pp. 179-202 Lab 8
Week 12	Chapter 9: Securing Data Transmission and Authentication	pp. 203-242 Lab 9
Week 13	Chapter 9: Securing Data Transmission and Authentication	pp. 203-242 Lab 9
Week 14	Chapter 10: Maintaining Network Health	pp. 243-262 Lab 10
Week 15	Chapter 11: Maintaining Windows Server 2008 File Services	pp. 263-287 Lab 11
Week 16	Course Review and Lab Completion	pp. 1-287 Labs 1 thru 11