Course Outline for CNT 55

WINDOWS SERVER

Effective: Fall

I. CATALOG DESCRIPTION:
   CNT 55 — WINDOWS SERVER — 3.00 units

   Installation and configuration of Windows Server operating system. Preparation for the Microsoft Certificated System Engineer (MCSE) exam. Students will learn to install, configure, and administer Microsoft Windows Server in a domain environment. Networking fundamentals and protocols with emphasis on the TCP/IP suite. Mixed environment networking, data security server domain models, network directory concepts. Server system administration, troubleshooting, and optimization. Creation of user and group accounts, group policies, administrating access to shared resources, configuration of hardware devices, monitoring of system resources, troubleshooting, and ensuring data integrity and security in a domain environment.

   2.50 Units Lecture 0.50 Units Lab

   Strongly Recommended
   CNT 51 - A+ Computer Fundamentals
   and

   CNT 52 - Networking Fundamentals

   Grading Methods:
   Letter or P/NP

   Discipline:

	MIN
Lecture Hours:	45.00
Lab Hours:	27.00
Total Hours:	72.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 2

III. PREREQUISITE AND/OR ADVISORY SKILLS:

   Before entering this course, it is strongly recommended that the student should be able to:

   A. CNT51
   B. CNT52

IV. MEASURABLE OBJECTIVES:
   Upon completion of this course, the student should be able to:

   A. perform local and distributed Windows Server operating system installation and configuration;
   B. administer a Windows domain network, including security issues;
   C. correlate the different layers of the OSI network model with actual network protocols;
   D. monitor and optimize system performance, reliability, and availability;
   E. implement network protocols and services, including virtual private networks (VPNs), routing and remote access, and Terminal Services;
   F. ensure system security through policies and security configuration tools;
   G. troubleshoot network problems and perform packet analysis.

V. CONTENT:
   A. Overview of Networking with Windows Server
      1. Planning the Network Model
      2. Server capabilities
      3. Workgroups and domains
      4. File system capabilities
      5. System requirements
   B. Planning Active Directory and Security
      1. Defining the Active Directory
      2. Schema

a. Namespace
3. Elements in the Active Directory
   a. Domain
   b. Organizational Unit
   c. Tree
   d. Forest
   e. Site
C. Installing Windows Server
   1. Hardware compatibility
   2. Disk partitions
   3. Installing from a CD-ROM
   4. Installing over the network
   5. First time installation versus upgrades
   6. Dual-boot installs
D. Server Configuration
   1. Control panel
   2. Hardware/software configuration
E. Using the Registry
   1. Purpose
   2. Organization
   3. Editing Tools
   4. Optimization
F. Security
   1. Distributed file system
   2. Access control
   3. Sharing security and rights
   4. Auditing capabilities
   5. Log files
   6. Physical and network data security
G. Installing and configuring network protocols
   1. TCP/IP
   2. NWLink
   3. NetBEUI
H. Managing User Accounts and Client Connectivity
   1. Planning/creating new user accounts
   2. Configuring client operating systems
   3. Using remote installation services
I. Managing Groups, Folders, Files, and Object Security
   1. Managing server resources and security through groups
   2. Managing object and object security
     a. Configuring rights
     b. Configuring folder and file security
   3. Configuring disk quotas
J. Remote access and virtual private networks
K. Server monitoring and optimization
L. Troubleshooting

VI. METHODS OF INSTRUCTION:
   A. **Lecture** -
   B. **Demonstration** -
   C. Internet research
   D. **Lab** - Laboratory assignments
   E. **Discussion** -

VII. TYPICAL ASSIGNMENTS:
A. Reading: 1. Read Chapter 9. Discuss Microsoft's Active Directory Services in relation to other industry standard network models for managing users and resources. B. Writing: 1. Choose one of the topics from a list of Internet technologies and write a one-page technical discussion of the subject C. Project: 1. Create an Active Directory Forest. Populate to the Organization Unit level with users and computers from the class.

VIII. EVALUATION:
   A. **Methods**

   B. **Frequency**

IX. TYPICAL TEXTS:
   1. Palmer *MCSE Guide to Microsoft Windows 2000 Server.*, Course Technology, 2000.
   2. Microsoft Corporation *MCSE Training Kit: Microsoft Windows 2000 Server.*, Microsoft, 2000.
   3. Computer Lab Supplies Certificate

X. OTHER MATERIALS REQUIRED OF STUDENTS: