

Course Outline
DCOM 203
Windows Network Infrastructure
4 Semester Hours

The Community College of Baltimore County

Description

Windows Network Infrastructure

Presents advanced concepts of the Microsoft Windows Network Infrastructure. This course, taught in a combination lecture and hands-on format, prepares students for one of the Microsoft MCP exams required for MCSA and/or MCSE Certification.

Prerequisite: DCOM 202 or consent of program coordinator

Overall Course Objectives

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

- A. Understand the role of TCP/IP in a Windows NT environment.
- B. Understand how Windows NT Client/Server services are delivered over TCP/IP.
- C. Configure TCP/IP and associated services in Windows NT.
- D. Understand basic TCP/IP troubleshooting utilities and how they can be used to solve configuration problems.
- E. Understand the role of IP routing in a TCP/IP environment.
- F. Install and configure TCP/IP in a Windows NT environment.
- G. Install and configure DHCP, WINS, and IP routing on a Windows NT Server.
- H. Configure TCP/IP Supernet, networks, and subnets.
- I. Use TCP/IP utilities to troubleshoot configuration problems.
- J. Identify packet traffic using a Windows NT Network Monitor.
- K. Demonstrate a broad understanding of TCP/IP networking protocols.

Major Topics

- A. Review OSI Model: Where does TCP/IP fit?
- B. OSI vs DOD Model
- C. IP, Transport, and Application layer protocols
- D. Roles of MAC and IP addresses
- E. Mastering IP addressing and Subnetting
- F. IP addressing problems
- G. IP configuration
- H. IP routing
- I. IP addressing problems
- J. The Network Monitor
- K. TCP/IP configuration
- L. Static routes, the route
- M. Ipconfig and tracert utilities

- N. ARP utility
- O. Role of Hosts and Lmhosts files
- P. Physical and Logical address Broadcasts and Node types
- Q. NBTSTAT utility
- R. The Role of DHCP in Windows NT
- S. Planning DHCP: What are some of the limitations of DHCP?
- T. Wins it's role, configuration, and maintenance
- U. DNS it's past, present, and future.
- V. How do DNS and WINS work together?
- W. Why internetwork browsing?
- X. Trouble shooting configurations using ping, ipconfig, tracert, route, netstat, arp, and nbtstat

Course Requirements

Grading/exams: Procedures for grading will be determined by the individual faculty member; there will be a *minimum* of 10 graded assignments. A final examination is required. Other graded assignments may come from any combination of the following categories: quizzes, hourly exams, a midterm exam, group projects, individual reports/presentations, or lab projects.

Writing: The individual faculty member will determine specific writing assignments.

Other Course Information

This course is taught in a computerized environment.

This course is a required course in the MCSE (Microsoft Certified Systems Engineer) concentration.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

Date Revised: 6/7/00