STANDARDIZED COURSE OUTLINE

SECTION I

SUBJECT AREA AND COURSE NUMBER: CST 171
COURSE TITLE: LAN System Management
COURSE CATALOG DESCRIPTION:
Beginning with a description of salient features of networking, the World Wide Web and the Internet, the course concentrates on the implementation and maintenance of Windows NT based server-client networks. Topics include principles of networking, advantages and disadvantages of networks, topology design, software installation, security, administration of client accounts, software implementation problems, connecting to the web, firewalls, troubleshooting and working with assistants. Emphasis is on hands-on practice designed to solve interesting and challenging projects while teaching the fundamentals of Windows NT server-client networks. Students are expected to produce and troubleshoot various network topologies with a working model of company network. *Formerly listed as CIS 160, not open to students who have successfully completed CIS 160.*

LECTURE HOURS PER WEEK: 3 **CREDIT HOURS:** 3
LAB HOURS PER WEEK (if applicable): n/a
PREREQUISITE(S): CSC 101 and CSA 163 or permission of the instructor

SECTION II

A. SCOPE:

This hands-on course is designed to prepare you for the MCSE certification exam and for the challenges you will face as a Microsoft networking professional. Specific topic coverage includes: Introduction to Windows Server; Hardware Devices; Users, Groups, and Policies; Access to Files; Disk and Data Storage; Printing; Server Management and Monitoring; Backups and Disaster Recovery; Web Resources; and Security Basics for Windows Server.

B. REQUIRED WORK:

Will vary by instructor. Students will be expected to do all required readings, assignments, tests, and quizzes as outlined by their instructor.

C. ATTENDANCE AND PARTICIPATION:

Regular attendance, assignment submission timeliness, promptness and class/lab participation will be expected. Instructors will include specific attendance and participation policies requirements in their class syllabi.

D. METHODS OF INSTRUCTION:

Methods may include any of the following: lecture, lecture/discussion, small group, collaborative learning, experimental/exploration, distance learning, student presentations, computer demonstrations, or use of technologies such as audio-visual materials, and computer laboratory equipment. Emphasis will be on hands-on computer exercises and problems.

E. OBJECTIVES, OUTCOMES, and ASSESSMENT

Students' grades will be based on achievement of learning the objectives and outcomes listed below as measured by the instructor's methods of assessment:

LEARNING OBJECTIVES	**LEARNING OUTCOMES**	**ASSESSMENT METHODS**
To demonstrate an understanding of:	**Student will:**	**As measured by:**
Introduction to Windows Server	a) Differentiate between different editions of Windows Server b) Identify and explain network models, server roles, Active Directory, and network management and maintenance concepts	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations
Hardware Devices	a) Understand and configure various hardware drivers, settings, and options b) Optimize server processor and memory usage c) Create and configure hardware profiles	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations
Users, Groups, and Policies	a) Differentiate between users and groups b) Explain the purpose and benefits of user and group accounts c) Create, configure, and troubleshoot user profiles, security groups, distribution groups, and group policies	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations
Access to Files	a) Identify and differentiate between various file systems supported in Windows Server b) Understand and configure file and folder attributes, shared folders and permissions, disk quotas, and the Distributed File System	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations
Disk and Data Storage	a) Understand and manage disks, partitions, and volumes b) Convert partitions and volumes from FAT to NTFS c) Use a variety of disk management utilities	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations
Printing	a) Identify and define printing terms and concepts b) Install and share printer resources c) Troubleshoot printer problems	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations
Server Management and Monitoring	a) Identify various management methods, tools, and processes b) Use various software and tools to monitor and troubleshoot server performance and resource usage	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations

Backups and Disaster Recovery	a) Plan for disaster recovery of Windows Server systems b) Back up and restore data	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations
Web Resources	a) Install and configure various web resources and tools b) Install and configure Web-based printing and printer management c) Troubleshoot Web client-browser connectivity	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations
Security Basics for Windows Server	a) Identify the various elements and techniques that can be used to secure a Windows Server system b) Use various tools to configure and review security settings	• Homework/Lab assignments; • Written and Oral activities; • Quizzes and Exams; • Online Computer Exercises; • Projects and Presentations

F. TEXT(S) AND MATERIALS:

An appropriate Windows Server Text, such as:

Text: MCSE/MCSA Guide to Managing a Microsoft Windows Server Environment *(current edition)*
Author: DiNicolo and McCann
Publisher: Course Technology

G. INFORMATION TECHNOLOGY:

This course is an information technology course and will require extensive computer lab time both for teaching and performing assignments. Students will require network accounts with access to current Windows Server software and the Internet as well as file storage space.