

COURSE OUTLINE

Revision: J. Abram, January, 2009

DEPARTMENT:	Technical Education
CURRICULUM:	Computing Technology
COURSE TITLE:	NETWORK SECURITY I
COURSE NUMBER:	CTN 277
TYPE OF COURSE:	Vocational Preparatory
COURSE LENGTH:	1 quarter
CREDIT HOURS:	5
LECTURE HOURS:	35
LAB HOURS:	20
CLASS SIZE:	24
PREREQUISITES:	CTN 270

COURSE DESCRIPTION:

Introduces the student to security concepts and practices used to guard your company's data and computer systems. Students will gain knowledge in selecting and deploying practical and effective solutions used to identify, assess, and prevent external and internal network threats. Operating systems covered include Windows 2000, NetWare and Linux. Topics include server security, firewall security, and remote access solutions

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Computation: Uses basic arithmetic and other basic mathematical operations as required by the program of study.
2. Human Relations: Use social and interactive skills to work in groups effectively.
3. Technology: Select and use appropriate technological tools for personal, academic and career tasks.

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STUDENT LEARNING OUTCOMES ADDRESSED (Cont'd):

4. Personal Responsibility: Motivated and able to continue learning and adapt to change. Value one's own skills, abilities, ideas and art, and take pride in one's own work.
5. Information Literacy: Access and evaluate information from a variety of sources and contexts, including technology. Use information to achieve personal, academic and career goals, as well as to participate in a democratic society.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Perform server diagnostics and maintenance methods used to provide network security.
2. Install service packs and patches to operating system.
3. Identify types of security firewalls and how they work.
4. Setup and administer Windows 2000 policies for file, folder and disk resources.
5. Monitor and filter network packets.
6. Setup and monitor intrusion detection.

TOPICAL OUTLINE:

APPROX. HOURS

I. Network Security Overview	5.0
a. Why secure your Network	
b. How much security do you need	
II. Network Security Fundamentals	8.0
a. Platforms and Securities	
b. Install Server Operating System	
c. Configure Operating System	
III. Security Measures and Countermeasures	15.0
a. Exploits	
b. Hacker Techniques	
IV. Securing Network Access	11.0
a. Policies, Protocols and Permissions	
b. Firewalls	
c. Encryption	
d. Remote Access	

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TOPICAL OUTLINE (Cont'd):

APPROX. HOURS

V. Network Vigilance	5.0
a. Auditing and Security	
b. Resource Monitoring and Diagnostics	
VI. Internet Architecture	3.0
VII. Security Issues	8.0
a. Novell Servers	
b. Linux Servers	
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Total	55.0 Hours

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