

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: Introduction To Networks

CODE NO. : CSN201 **SEMESTER:** Three

PROGRAM: Computer Engineering Technician
Computer Programmer / Analyst
Computer Systems Support Technician

AUTHOR: Dan Kachur

DATE: January 2001 Previous Outline Dated: June 1999

APPROVED:

		_____	_____
		DEAN	DATE
TOTAL CREDITS:	5		

PREREQUISITE(S): CSN200

HOURS/WEEK: 4

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For additional information, please contact Kitty DeRosario
School of Trades & Technology
(705) 759-2554, Ext. 642

I. COURSE DESCRIPTION:

Students will develop knowledge of LAN, MAN, and WAN types and related standards.

Students will be introduced to Network Operating Systems including current implementations and future trends in the workplace. Developing practical skills in LAN installation, administration, and troubleshooting are important objectives of this course. Microsoft Windows NT 4 Server will be used as the primary learning tool.

Students will perform a Windows NT Server install. System administration will then be explored by adding groups and users.

Domain Models, Trust Relationships, Backup Strategies, and Printing services will be explored as well.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. Introduction To Network Operating Systems**Potential Elements of the Performance:**

This learning outcome will constitute approximately 4% of the course.

- Learn the structure of a Network Operating System environment
- Identify the major Network Operating Systems in the workplace
- Learn the history of each Network Operating System
- Compare certifications of each Network Operating System
- Compare pricing, support, and past / current / future market share
- Contrast the difference between a Peer-Lan and Client / Server
- Configure a Peer-LAN environment using Windows 98

2. **Local area network types, media, hardware components, protocols**

Potential Elements of the Performance:

This learning outcome will constitute approximately 20% of the course.

- Compare common LAN topologies
- Specify LAN components required for different types of LANs.
- Compare Ethernet (IEEE 802.3), Token Ring (IEEE 802.5) and other LAN implementations to enable appropriate selection.
- Improve the performance of a LAN.
- Compare networking protocols and routing methods.
- Describe, terminate and test various LAN cables.

3. **Backbone networks**

Potential Elements of the Performance:

This learning outcome will constitute approximately 5% of the course.

- Identify and specify internetworking devices used in backbone or enterprise networks including hubs, bridges, switches, routers, and gateways.
- Compare alternatives for high-speed interconnection and upgrade options in backbone networks.

4. **MANs and WANs**

Potential Elements of the Performance:

This learning outcome will constitute approximately 5% of the course.

- Compare WAN and MAN telecommunications services: Dialed-circuit services, Dedicated Circuit services, Switched Circuit services, and Packet Switched Networks.
- Select and improve MAN/WAN services for utilization within an organization.

5. Install and configure Windows NT Server**Potential Elements of the Performance:**

This learning outcome will constitute approximately 4% of the course.

- Identify the startup location and executable file for the NT Server install
- Install Windows NT Server on a FAT partition
- Login to Windows NT Server
- Configure TCP/IP to access the network and Internet
- Explore the NT boot process
- Create an emergency repair disk (ERD)
- Identify service packs

6. Administer Windows NT Server Users / Groups**Potential Elements of the Performance:**

This learning outcome will constitute approximately 10% of the course.

- Explore User Manager for Domains
- Create a backup admin account
- Create Local and Global Groups
- Create user accounts
- Set security for user accounts
- Login to NT Server using Windows 98 as a client

7. Administer Windows NT Server Files / Directories (NTFS Mode)**Potential Elements of the Performance:**

This learning outcome will constitute approximately 12% of the course.

- Explore and compare File / Directory permissions of NTFS
- Identify and implement Directory Permissions
- Identify and implement File Permissions
- Apply and test File Permissions over Directory Permissions

8. Establish Trust Relationships with other NT Servers**Potential Elements of the Performance:**

This learning outcome will constitute approximately 6% of the course.

- Learn the various Domain Models
- Identify the difference between Trusted and Trusting
- Establish a one-way trust with another Domain
- Establish a two-way trust with another Domain
- Access files on a Trusting Domain

9. Implement Policies and Profiles**Potential Elements of the Performance:**

This learning outcome will constitute approximately 12% of the course.

- Compare Policies VS Profiles
- Install a local policy
- Work with the Window Registry
- Create a roaming profile
- Differentiate between Local and Roaming profiles
- Understand the flow of Roaming profiles

10. Manage Printing Services in a Network Environment**Potential Elements of the Performance:**

This learning outcome will constitute approximately 6% of the course.

- Install and configure Printing Services for NT Server
- Test printing services for both Server and Client

11. Perform Remote Administration from a Windows Client**Potential Elements of the Performance:**

This learning outcome will constitute approximately 4% of the course.

- Install remote client services on Windows 98
- Explore three remote-access activities using Windows 98 as a client

12. Create Backup Strategies and Disaster Recovery Plans**Potential Elements of the Performance:**

This learning outcome will constitute approximately 6% of the course.

- Learn various backup methods and schedules
- Perform an install of Tape-Backup software
- Perform or simulate a Daily Backup

13. Install, configure and test RAS**Potential Elements of the Performance:**

This learning outcome will constitute approximately 6% of the course.

- Install RAS
- Explore RAS options and configurations
- Simulate a RAS Dial-In using an RS-232 cable and Windows NT Workstation

III. REQUIRED RESOURCES/TEXTS/MATERIALS:

Title: Windows NT Server 4
 Author: Joseph Williams
 Publisher: New Riders Top Score
 ISBN: 1-58076-011-2

IV. EVALUATION PROCESS/GRADING SYSTEM:

3 WRITTEN TESTS	60%
TAKE-HOME AND LAB ASSIGNMENTS	40%

(The percentages shown above may vary slightly if circumstances warrant.)

The following semester grades will be assigned to students in postsecondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
R (Repeat)	59% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
U	Unsatisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade. This is used in limited situations with extenuating circumstances giving a student additional time to complete the requirements for a course (see <i>Policies & Procedures Manual – Deferred Grades and Make-up</i>).	
NR	Grade not reported to Registrar's office. This is used to facilitate transcript preparation when, for extenuating circumstances, it has not been possible for the faculty member to report grades.	

ELIGIBILITY FOR X GRADES / UPGRADING OF INCOMPLETES

When a student's course work is incomplete or final grade is below 60%, there is the possibility of upgrading to a pass when a student meets all of the following criteria:

1. The student's attendance has been satisfactory.
2. An overall average of at least 50% has been achieved.
3. The student has not had a failing grade in all of the theory tests taken.
4. The student has made reasonable efforts to participate in class and complete assignments.

Note: **The opportunity for an X grade is usually reserved for those with extenuating circumstances.** The nature of the upgrading requirements will be determined by the instructor and may involve one or more of the following: completion of existing labs and assignments, completion of additional assignments, re-testing on individual parts of the course or a comprehensive test on the entire course.

V. SPECIAL NOTES:Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493, 717, or 491 so that support services can be arranged for you.

Retention of course outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course outline amendments:

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VI. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.