SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: **NETWORK CERTIFICATION I**

Code No: **CSN303**   *Semester:*   **5**

Program: **COMPUTER NETWORK TECHNOLOGY**

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Date: **August , 1998**   *Previous Outline Dated:*

Approved: *K. DeLasire*   *Spt 1/98*
            Dean   **Date**

Total Credits: **6**

Prerequisites: **CSN203**

Length of Course: **4 Hours /Week**   *Total Credit Hours:*   **96**

Network Certification I   CSN303
COURSE NAME   *CODE NO.*

I.   **COURSE DESCRIPTION:**

This course begins the preparation for certification in a networking area of
specialisation. At the present time the courses and exams identified as the
Microsoft™ Certified Systems Engineer (MCSE) requirements will be the basis for
this course and two subsequent courses. The student will use available
resources, MCSE exam preparation guides, sample tests and hands-on lab
activities to prepare for the specific objectives as published by Microsoft™ . The
chosen track will be Microsoft Windows NT 4.0 curriculum.

Rationale:

The MCSE curriculum is extensive and beyond the domain of a single course.
Two additional Network Certification courses in 6th semester will further the
students progress towards full certification.

Since many of the fundamentals in the MCSE curriculum have been previously
taught in prerequisite second year courses, this course will primarily be based on
self-study with self-directed lab activities geared towards an in-depth
understanding of Microsoft™ networking. It is assumed that many more hours
outside the assigned lab hours will be required by the student to reach the level
of proficiency required.

This course in itself does not result in MCSE certification; formal exams must
subsequently be taken at a Sylvan Prometric™ Testing Centre at the student's
own expense.

MCSE Requirements:
Candidates must pass 4 operating systems exams and two elective exams. The
operating systems exams require candidates to prove their expertise with
desktop, server and networking components. The elective exams require proof
of expertise with Microsoft™ BackOffice products. The complete requirements
are published at http://www.microsoft.com/mcp/certstep/mcse.htm.

These specific requirements are subject to change; the four core operating
systems exams are presently as follows:

Exam 70-058 Networking Essentials
Exam 70-067 Implementing and Supporting Microsoft Windows NT Server 4.0

Exam 70-068 Implementing and Supporting Microsoft Windows NT Server 4.0 in the Enterprise

Exam 70-073 Microsoft Windows NT Workstation 4.0

or

Exam 70-064 Implementing and Supporting Microsoft™ Windows 95.

The two exams prepared for in this course are as follows:

Exam 70-067 Implementing and Supporting Microsoft Windows NT Server 4.0

Skills Being Measured

This certification exam measures the ability to implement, administer, and troubleshoot information systems that incorporate Windows NT Server version 4.0 in a simple computing environment. A simple computing environment is typically a homogeneous LAN. It might include one or more servers, a single domain, and a single location; and it might have file-sharing and print-sharing capabilities. Before taking the exam, you should be proficient in the following job skills.

Exam 70-058   Networking Essentials

Skills Being Measured

This certification exam measures the ability to implement, administer, and troubleshoot information systems that incorporate Microsoft Windows 95 and any products in the Microsoft BackOffice™ family. This exam covers only the networking knowledge and skills common to both Windows 95 and BackOffice products.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

A. Learning outcomes:

1. Implement, administer, and troubleshoot information systems that incorporate Microsoft Windows NT Server version 4.0 in a simple computing environment.

2. Implement, administer, and troubleshoot information systems that incorporate Microsoft Windows 95 and any products in the Microsoft BackOffice™ family.

B. Learning Outcomes and Elements of the Performance:

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

1. Implement, administer, and troubleshoot information systems that incorporate Microsoft Windows NT Server version 4.0 in a simple computing environment.

Elements of the Performance:

1. Plan the disk drive configuration for various requirements.
2. Choose and configure protocols for various situations.
3. Install Windows NT Server to perform various roles, and do so by using various installation methods.
4. Configure NT Server peripherals and devices, services, printers and various types of client computers.
5. Manage user and group accounts, policies and profiles, disk resources and remote servers.
6. Configure NT Server for interoperability with Netware servers.
7. Install and configure Remote Access Service (RAS).
8. Monitor performance.
9. Choose the appropriate course of action to take to resolve a wide variety of NT Server-related problems.

This learning outcome will constitute approximately 50% of the course.

2.   Implement, administer, and troubleshoot information systems that incorporate Microsoft Windows 95 and any products in the Microsoft BackOffice™ family.

Elements of the Performance:

1.   Define common networking terms for LANs and WANs.
2.   Explain fundamental network communications concepts.
3.   Select appropriate media, topologies and protocols for various situations.
4.   Select appropriate connectivity devices for various networks.
5.   List the characteristics, requirements and appropriate situations for common WAN connection services.
6.   Choose an administrative plan to meet specified needs such as performance management, account management, security, disaster recovery and trend monitoring.
7.   Configure and resolve conflicts for multiple network adapters in a token-ring or Ethernet network.
8.   Identify common errors associated with components required for communications.
9.   Diagnose and resolve common connectivity problems with cards, cables, and related hardware.
10.   Identify and resolve network performance problems including broadcast storms.

This learning outcome will constitute approximately 50% of the course.

III.   TOPICS TO BE COVERED:

1.   Topics required to pass MCSE Exam 70-067: Implementing and Supporting Microsoft Windows NT Server 4.0. Implement, administer, and troubleshoot information systems that incorporate Windows NT Server version 4.0 in a simple computing environment.

2.   Skills required to pass MCSE Exam 70-058: *Networking Essentials.* Implement, administer, and troubleshoot information systems that incorporate Microsoft Windows 95 and any products in the Microsoft BackOffice™ family.

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BackOffice™ family.

Important Note: There may be opportunities to substitute one of the major topics in this course with an alternate exam required for MCSE certification. Permission of the faculty will be required.

IV. REQUIRED STUDENT RESOURCES/TEXTS:

Students will be required to purchase a Microsoft Certified Professional Approved Study Guide in the specified topic areas; specifically Windows NT Server 4.0 and Networking Essentials. A list of approved texts will be made available at the start of the semester.

V. EVALUATION PROCESS/GRADING SYSTEM:

Tests similar to actual MCSE on-line tests will be used to evaluate progress.

    On-line tests   **100%**

If students complete one MCSE-equivalent exam rather than two, the highest grade they will be eligible for will be a B. The passing grade on the tests will be in-line with those used on actual MCSE exams. Details will be provided before tests are administered.

GRADING SYSTEM

A+		90	-	100%
A		80	-	89%
B		70	-	79%
C		55	-	69%
R	Repeat	Less than 55%		
X	Incomplete			

UPGRADING OF INCOMPLETES

When a student's course work is incomplete or final grade is below 55%, there is the

3.   The student has made reasonable efforts to participate in class and maintain the recommended schedule for assigned activities.

The nature of the upgrading requirements will be determined by the instructor and may involve re-testing and/or additional lab assignments

ATTENDANCE:

Absenteeism will affect a student's ability to succeed in this course. Absences due to medical or other unavoidable circumstances should be discussed with the instructor.

VI.   SPECIAL NOTES:

- **Special Needs**
Students with special needs (e.g. physical limitations, visual or hearing impairments, or learning disabilities) are encouraged to discuss any required accommodations confidentially with the instructor and/or contact the Special Needs Office so that support services can be arranged.

- **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 post-secondary institutions.

- **Course Modifications**
Your instructor reserves the right to make reasonable modifications to the course as deemed necessary to meet the needs of students or take advantage of new or different learning opportunities.

VII.   PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced standing in the course should consult the instructor. This course is not eligible for challenge at the present time.