

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: NETWORK CERTIFICATION 2

Code No: CSN306 *Semester:* 6

Program: COMPUTER NETWORK TECHNOLOGY

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Date: January , 1999 *Previous Outline Dated:*

Approved: H. DeSousa Jan. 26/99
Dean Date

Total Credits: 6

Prerequisites: CSN203

I. COURSE DESCRIPTION:

This course continues with the preparation for certification in a networking area of specialization. At the present time the courses and exams identified as the Microsoft™ Certified Systems Engineer (MCSE) requirements will be the basis for this course. 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. This is a continuation of a Network Certification course in 5th semester and 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 elective exams are presently as follows:

- Exam 70-085: Implementing and Supporting Microsoft® SNA Server 4.0
- Exam 70-086: Implementing and Supporting Microsoft® Systems Management Server 2.0
- Exam 70-029: Designing and Implementing Databases with Microsoft® SQL Server™ 7.0
- Exam 70-028: Administering Microsoft® SQL Server™ 7.0
- Exam 70-059: Internetworking with Microsoft® TCP/IP on Microsoft® Windows NT® 4.0
- Exam 70-056: Implementing and Supporting Web Sites Using Microsoft® Site Server 3.0
- Exam 70-076: Implementing and Supporting Microsoft® Exchange Server 5.5
- Exam 70-087: Implementing and Supporting Microsoft® Internet Information Server 4.0
- Exam 70-088: Implementing and Supporting Microsoft® Proxy Server 2.0
- Exam 70-079: Implementing and Supporting Microsoft® Internet Explorer 4.0 by Using the Internet Explorer Administration Kit

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

Exam 70-59 Microsoft TCP/IP on Windows NT 4.0

Skills Being Measured

This certification exam measures your ability to implement, administer, and troubleshoot information systems that incorporate Microsoft TCP/IP.

Exam 70-81 Exchange Server 5.5.

Skills Being Measured

This certification exam measures your ability to implement, administer, and troubleshoot information systems that incorporate Microsoft Exchange Server version 5.5 or Exchange Server 5.5 with Service Pack 1.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

A. Learning outcomes:

1. Implement, administer, and troubleshoot information systems that incorporate Microsoft TCP/IP.
2. Implement, administer, and troubleshoot information systems that incorporate Microsoft Exchange Server version 5.5 or Exchange Server 5.5 with Service Pack 1.

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 TCP/IP.

Elements of the Performance:

1. Select the appropriate services to install when using Microsoft TCP/IP.
2. Install and configure Microsoft DHCP Relay Agent.
3. Install and configure Microsoft DNS Server service.
4. Configure SNMP.
5. Run WINS on a multihomed computer.
6. Configure a RAS server.
7. Support browsing in a multiple-domain routed network.
8. Identify tools to monitor TCP/IP traffic.
9. Diagnose IP addressing problems.
10. Use TCP/IP utilities to diagnose IP configuration problems.

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

2. Implement, administer, and troubleshoot information systems that incorporate Microsoft Exchange Server version 5.5 or Exchange Server 5.5 with Service Pack 1.

Elements of the Performance:

1. Choose an implementation strategy for Microsoft Exchange Server 5.5.
2. Develop an infrastructure for Exchange Server 5.5.
3. Develop server-side scripting strategies.

V. EVALUATION PROCESS/GRADING SYSTEM:

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

On-line tests 100%

Students must complete both MCSE-equivalent exams.

GRADING SYSTEM

A+	90	-	100%
A	80	-	89%
B	70	-	79%
C	60	-	69%
R	Repeat Less than 60%		
X	Incomplete		

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 students attendance has been satisfactory.
2. An overall average of at least 50% has been achieved by semester's end.
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

4. Configure directory replication.
5. Configure the message transfer agent within a site.
6. Back up and restore the Exchange.5.5 organization.
7. Monitor server performance by using SNMP and MADMAN MIB.
8. Optimize foreign connections and site-to-site connections.
9. Diagnose and resolve server directory problems.
10. Diagnose organization security problems.

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

III. TOPICS TO BE COVERED:

1. Topics required to pass MCSE Exam 70-59: Microsoft TCP/IP on Windows NT 4.0. This certification exam measures your ability to implement, administer, and troubleshoot information systems that incorporate Microsoft TCP/IP.
2. Skills required to pass MCSE Exam 70-81 Exchange Server 5.5: This certification exam measures your ability to implement, administer, and troubleshoot information systems that incorporate Microsoft Exchange Server version 5.5 or Exchange Server 5.5 with Service Pack 1.

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 Microsoft TCP/IP on Windows NT and Exchange Server 5.5. A list of approved texts will be made available at the start of the semester.

In addition, students will be required to supply a removable hard drive for use in the lab (specifications will be described at the beginning of the course) for their own personal use in installations and experimentation.

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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.

