

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE MARIE, ON



COURSE OUTLINE

Course Title: NETWORK SERVICE AND SUPPORT

Code No.: CSN302 Semester: 5

Program: COMPUTER NETWORK TECHNOLOGY

Author TYCHO BLACK

Date: July, 2000 Previous Outline Date: June, 1999

Approved: _____

Dean

Date

Total Credits: 6

Prerequisite: CSN203

Length of Course: 15 weeks

Total Credit Hours: 90

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I. COURSE DESCRIPTION:

This course focuses on the service and support role of a network technologist, applying knowledge learned in this and previous courses to actual problems and issues faced in real networks. Through lectures, hands-on activities in the lab and case studies the goal is to develop skills that will enhance the technologist's ability to maintain and improve networks and their resources. In addition to the technical issues associated with failure modes, performance issues, upgrades and network design, the human side of customer support will be emphasised, in a variety of network operating system environments.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

A. Learning Outcomes:

1. Troubleshoot common problems in Windows NT, Windows 2000 and Novell NetWare networks.
2. Recommend and implement efficient, cost-effective installation and upgrade paths for networks while documenting the pros and cons associated with them.
3. Provide service and support for clients in a professional and efficient manner.
4. Maintain a secure, optimised networking environment.

B. Learning Outcomes and Elements of the Performance:

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

- 1. Troubleshoot common problems in Windows NT, Windows 2000 and Novell Netware networks.**

Elements of the Performance:

1. Utilise web-based and other resources such as FAQ files, newsgroups,

- resource kits, help files, etc. to facilitate solutions to network-related problems.
2. Discuss and present case histories of network-related problems.
 3. Troubleshoot common problems in a Windows NT 4 environment using available resources.
 4. Support interoperability between NT, Unix and NetWare environments.

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

- 2. Recommend and implement efficient, cost-effective installation and upgrade paths for networks while documenting the pros and cons associated with them.**

Elements of the Performance:

1. Use network documentation or drawing utilities to document network resources.
2. Recommend viable upgrade paths for various LANs, WANs and Enterprise networks.
3. Compare current Windows NT, NetWare and Unix products and upgrades and recommend an upgrade for particular networks.
4. Upgrade a Windows NT server to a Windows 2000 Server environment and configure and manage its resources effectively.
5. Upgrade a Novell NetWare environment from Netware 4.1 to Netware 5.1 and configure and manage its resources effectively.
6. Perform Client software evaluation, installation and support utilising efficient techniques.

This learning outcome will constitute approximately 45% of the course.

- 3. Provide service and support for clients in a professional and efficient manner.**

Elements of the Performance:

1. Describe the requirements and operation of a corporate Help Desk.
2. Provide customer service in a professional, effective manner employing appropriate behaviours.
3. Employ appropriate software and license management practices and maintain effective records of resources.

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

4. Maintain a secure, optimised networking environment.

Elements of the Performance:

1. Be aware of security issues in NT, NetWare and Unix environments and be able to implement measures to ensure adequate security of resources.
2. Prepare a security policy for a site.
3. Optimise the server environment enabling peak performance.
4. Recommend e-commerce and encryption solutions for web-based systems.

This learning outcome will constitute approximately 25 % of the course.

IV. TOPICS TO BE COVERED:

1. Installing and maintaining network services in a Windows NT/Windows 2000 Server / Active Directory environment.
2. Installing and maintaining network services in a Novell NetWare/NDS environment.
3. Upgrade options for typical LAN and WAN environments.
4. Best practices for effective customer service.
5. Maintaining a secure, optimised network.

IV. REQUIRED STUDENT RESOURCES/TEXTS:

TEXT BOOK:

- Notes and resources provided by instructor.
- Internet-based resources.

REFERENCES:

- "Windows NT Troubleshooting and Configuration", Robert Reinstein, Sams Publications
- "MCSE Guide to Microsoft Windows 2000 Server" by Michael J. Palmer,

- Thompson Learning, 2000.
- "The Complete Reference Netware 5" by Payne and Sheldon, Osborne/McGraw-Hill 1999
- "Windows 2000 Server: Planning and Migration" by Sean Deuby, MTP, 1999

V. EVALUATION PROCESS/GRADING SYSTEM:

2 WRITTEN TESTS	60%
LAB ASSIGNMENTS/PRESENTATIONS	40%

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

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 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.

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.

LAB REPORTS

Required lab report requirements will be detailed before labs are assigned.

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.