SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

Sault College

COURSE OUTLINE

COURSE TITLE: NETWORK SERVICE AND SUPPORT

CODE NO. : CSN302   **SEMESTER:** 5

PROGRAM: COMPUTER NETWORK TECHNOLOGY

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DATE: JUNE 2008   **PREVIOUS OUTLINE DATED:** JUNE 2007

APPROVED:

_____   _____
                            CHAIR   DATE

TOTAL CREDITS: 4

PREREQUISITE(S): CSN100

HOURS/WEEK: 64 Hours Total – 4 hours per week

Network Service and Support   CSN302

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 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 design, the human side of customer support will be emphasized. In this context, network documentation skills using Visio and project management skills using Microsoft Project will be developed.

II.   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 Computer Networks.**

     Potential Elements of the Performance:

     - Utilize web-based and other resources such as FAQ files, newsgroups, vendor-based resources, resource kits, help files, etc. to facilitate solutions to network-related problems.
     - Discuss and present case histories of network-related problems.
     - Troubleshoot common problems in the Windows 2003 Server environment using available resources including command line utilities.

2.   **Design and implement automated recovery processes for failed Network Servers and components**

     Potential Elements of the Performance:

     - Use network documentation or drawing utilities, such as Microsoft Visio, to document network resources.
     - Identify the weakest links on the Network and design a redundancy plan to eliminate failures on these links
     - Perform an 'Automated System Recovery' on your server
     - Perform unattended installations of Windows systems.
     - Investigate disk imaging techniques and best practices for deploying software and operating systems.

3. **Plan, recommend and Implement efficient upgrade paths for networks and equipment**

    Potential Elements of the Performance:

    - Research network operating system add-on components that allow for performance and reliability improvements over the existing network OS.
    - Utilize project management software to prepare a timeline, equipment needs, human resources and scheduling of a network upgrade.
    - Recommend viable upgrade paths for various LANs, WANs and Enterprise networks.

4. **Provide network service and support for clients**

    Potential Elements of the Performance:

    - Provide customer service in a professional, effective manner employing appropriate behaviours.
    - Understand the nature of support roles in various IT environments and current employment prospects in those job markets.
    - Employ appropriate software and license management practices and maintain effective records of resources.
    - Utilize network management tools to monitor and manage network resources.
    - Create a disaster recovery plan for an organization.

5. **Research and recommend appropriate networking solutions using new technologies.**

    Potential Elements of the Performance:

    - Research, discuss and compare various current network technologies such as VoIP, Blade Servers, SANs, Wireless Technologies, etc.

III.   TOPICS:

SPECIFIC TOPICS	TIME (Weeks)
1. Troubleshoot Computer Networks	2
2. Design Automated Recovery Procedures	5
3. Plan Network Upgrades	4
4. Provide Network Client Support	4
5. Research new Technologies	1

IV.   REQUIRED RESOURCES/TEXTS/MATERIALS:

TEXT BOOK:
- "Computer User Support for Help Desk & Support Specialists", Third Edition
- ISBN: 13 978-0-619-21510-1

This book indicates a 120-Day Trial of Microsoft Project Professional 2003

V.   EVALUATION PROCESS/GRADING SYSTEM:

2 Written Tests @ 20%	40%
Lab Assignments	40%
Participation and Attendance	10%
Final Project	10%

(Up to 10% penalty for absenteeism. The percentages shown above may vary slightly if circumstances warrant.)

The following semester grades will be assigned to students:

Grade	Definition	Grade Point Equivalent
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

UPGRADING OF INCOMPLETES

When a student's course work is incomplete or final grade is below 50%, 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 good.
2.   An overall average of at least 45% 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 ASSIGNMENTS
Required lab report requirements will be detailed before labs are assigned. Late penalties will be applied to assignments not handed in by the due date.

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. In cases of repeated absence from class, a penalty of up to 10% of the final grade may be assessed.

VI.   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 professor and/or the Special Needs office. Visit Room E1101 or call Extension 2703 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.

Communication:
The College considers *WebCT/LMS* as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the *Learning Management System* communication tool.

Plagiarism:
Students should refer to the definition of "academic dishonesty" in *Student Code of Conduct.* 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.

VII.   PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.