

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 course, software including Windows 2008 Server, Microsoft Operations Manager, Microsoft Configuration Manager, Microsoft SQL Server and some 3rd party tools will be used.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Troubleshoot Computer NetworksPotential 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 / 2008 Server environments using available resources including command line utilities.

2. Design Automated Recovery ProceduresPotential Elements of the Performance:

- Use network documentation or drawing utilities, such as Microsoft Visio, to document networks.
- 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.
- Investigate disk imaging techniques and best practices for deploying software and operating systems.
- Contrast Backup media types including aging of data vs. reliability of recovery

3. Plan Network UpgradesPotential 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 Client Support**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 New Network TechnologiesPotential Elements of the Performance:

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

III. TOPICS:

1. Troubleshoot Computer Networks
2. Design Automated Recovery Procedures
3. Plan Network Upgrades
4. Provide Network Client Support
5. Research New Network Technologies

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

All resources for this course will be distributed to the student via web-links and handouts. .

V. EVALUATION PROCESS/GRADING SYSTEM:

Tests (1 @ 20% each)	10 %
Independent Projects (3)	40 %
Participation and Attendance	10 %
Lab Assignments	40 %

Some minor modifications to the above percentages may be necessary. The professor reserves the right to adjust the mark up or down 5% based on attendance, participation, leadership, creativity and whether there is an improving trend.

The professor reserves the right to adjust the number of tests, practical tests and quizzes based on unforeseen circumstances. The students will be given sufficient notice to any changes and the reasons thereof.

- Successful completion of this course is greatly improved with a disciplined approach and consistent attendance to both the lab and lecture / theory classes.
- Students must complete and pass both the test and assignment portion of the course in order to pass the entire courses.
- All Assignments must be completed satisfactorily to complete the course. Late hand in penalties will be 5% per day. Assignments will not be accepted past one week late unless there are extenuating and legitimate circumstances. It is not acceptable to miss classes and / or labs without a reasonable explanation.
- There will also be a lab exercise each and every week that will be due during that lab period. In the event that it cannot be completed during lab time, you will be allowed to complete it as a homework exercise and demonstrate it the following lab with no penalty.

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 professor. Students are required to be in class on time and attendance will be taken within the first five minutes of class. A missed class will result in a penalty in your marks unless you have discussed your absence with the professor as described above. The penalty depends on course hours and will be applied as follows:

Course Hours	Deduction
5 hrs/week (75 hrs)	1% per hour
4 hrs/week (60 hrs)	1.5% per hour
3 hrs/week (45 hrs)	2% per hour
2 hrs/week (30 hrs)	3% per hour

The following semester grades will be assigned to students:

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
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.	

VI. SPECIAL NOTES:Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.