



**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, network monitoring and design, the human side of customer support will be emphasized. Selected new computer, network and communication technologies will also be explored.

**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 Windows 2000 or Server 2003 networks.**

**Potential Elements of the Performance:**

1. 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.
2. Discuss and present case histories of network-related problems.
3. Troubleshoot common problems in Windows 2000 / 2003 environments using available resources including command line utilities.

*This learning outcome will constitute approximately 15% of the course.*

**2. Recommend and implement efficient, cost-effective installation, maintenance and upgrade paths for networks.**

**Potential Elements of the Performance:**

1. Use network documentation or drawing utilities, such as Microsoft Visio, to document network resources.
2. Recommend viable upgrade paths for various LANs, WANs and Enterprise networks.
3. Utilize effective project management and scheduling principles.

4. Upgrade a Windows 2000 Server environment to Windows Server 2003.
5. Perform unattended installations of Windows systems.
6. Investigate disk imaging techniques and best practices for deploying software and operating systems.

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

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

**Potential Elements of the Performance:**

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

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

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

**Potential Elements of the Performance:**

1. Research, discuss and compare various current network technologies such as VoIP, Blade servers, SANs, etc.

*This learning outcome will constitute approximately 15% of the course.*

**III. TOPICS:**

1. Best practices for installing and maintaining network services.
2. Upgrade options for typical LAN and WAN environments utilizing new technologies.
3. Best practices for effective customer service.

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

TEXT BOOK:

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

**V. EVALUATION PROCESS/GRADING SYSTEM:**

2 Written Tests	40%
Lab Assignments/Presentations/Reports	60%

(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 in postsecondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	4.00
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 instructor 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.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. 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.

While it is expected that students discuss assignments with each other and share ideas, it is not acceptable that students hand in work done by someone else and claim it as their own. Plagiarism on assignments will result in a zero grade being assigned for that assignment for everyone involved.

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 advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

**VIII. DIRECT CREDIT TRANSFERS:**

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.