



**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. Wireless LANs and associated new technologies will also be a major component of this course.

**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 NT and Windows 2000 networks.**

**Potential Elements of the Performance:**

1. Utilise 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 NT 4 and Windows 2000 / Active Directory environment using available resources.

*This learning outcome will constitute approximately 10% 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 to document network resources.
2. Recommend viable upgrade paths for various LANs, WANs and Enterprise networks.

3. Compare current Windows 2000, 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. Install and manage Windows 2000 Active Directory.
6. Upgrade a Windows 2000 Server environment to Windows Server 2003.
7. Perform unattended installations of Windows 2000 Professional and Server.
8. Perform Client software evaluation, installation and support utilising efficient techniques.
9. Investigate disk imaging techniques and best practices for deploying software and operating systems.

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

3. **Provide 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. Employ appropriate software and license management practices and maintain effective records of resources.

*This learning outcome will constitute approximately 5% of the course.*

4. **Implement Wireless Communications solutions in a variety of environments.**

**Potential Elements of the Performance:**

1. Describe wireless communications alternatives and their appropriate application, advantages and disadvantages.
2. Describe radio frequency communications components, methods and standards.
3. Explain how infrared and Bluetooth Personal Area Networks operate.
4. Configure, implement and test both low-speed and high-speed WLANs and their security.
5. Describe digital cellular telephony and the types of applications and features available.
6. Describe fixed Wireless alternatives and the applications they are best suited to.

*This learning outcome will constitute approximately 40 % of the course.*

**III. TOPICS:**

1. Best practices for installing and maintaining network services in a Windows NT/Windows 2000 Server /Active Directory environment.
2. Upgrade options for typical LAN and WAN environments.
3. Best practices for effective customer service.
4. Wireless networks.

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

**TEXT BOOK:**

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

**REFERENCES:**

- "MCSE Guide to Microsoft Windows 2000 Server" by Michael J. Palmer, Thompson Learning, 2000.

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

2 WRITTEN TESTS	60%
LAB ASSIGNMENTS/PRESENTATIONS	40%

(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%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
F (Fail)	59% 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 satisfactory.
2. The student's accumulated grade in the course to date is not less than 40%.
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 E1204 or call Extension 493 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.

Network Service and Support  
*COURSE NAME*

CSN302  
*CODE NO.*

**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.