
COURSE PREFIX/NO:	IST 251
COURSE TITLE:	LAN Networking Technologies
LEC HRS/WEEK:	3.0
LAB HRS/WEEK:	0.0
CREDIT HRS/SEMESTER:	3.0

[Distance Learning Attendance/VA Statement](#)
[Textbook Information](#)

COURSE DESCRIPTION

This course provides software specific concepts of Local Area Network (LAN) communications, networking, and connectivity.

COURSE COMPETENCIES

Upon successful completion of this course, a student should be competent to perform the following tasks:

Module I – Networking Concepts and Installation

1. Define operating system and networking concepts and identify terms used by Windows operating systems.
2. Recognize different network layouts, protocols, and some of their basic components. Identify the OSI model and apply its usage to network operations.
3. Install operating system. Given a scenario, format and partition disks, install the operating system and setup system parameters.
4. Create users and groups and assign proper rights and privileges based upon a specific scenario.
5. Demonstrate basic networking concepts by:
 - Defining thread, process, HAL, kernel, protocol, binding, domain, NTFS, DNS, DHCP, FAT, TCP/IP, etc.
 - Identifying the OSI model and its layers.
6. Demonstrate user administration by:
 - Creating a user and a group. Adding users to groups.
 - Developing a strategy for adding users and groups within a Domain.
 - Assigning rights for a user at a computer and showing the assigned rights that are in effect for the user's logon.
7. Demonstrate the installation process by:
 - Describe how to install a Modern Windows Operating System.
 - Create an unattended installation script for installing a prescribed set of options.
 - Locating and utilizing the tools needed for an unattended installation.
 - Define the terminology used in unattended installations.
 - Completing an unattended installation for a given scenario.

Module II - Monitoring and Managing Network Users & Troubleshooting

1. Configure the operating environment to suit user's needs. Be able to identify common and different elements between Windows operating systems.
2. Perform file and directory level sharing and security.
3. Set up a printer, establishing user rights and privileges for printing on a network.
4. Demonstrate methods to troubleshoot problems in Windows operating systems Professional by:
 - Displaying the event log and identifying problems.
 - Using the Diagnostic Tools to identify problems. Describe various settings.
 - Displaying system operations using the System Monitor.
5. Demonstrate the ability to set up file and directory shares and permissions by:
 - Establishing a shared resource.
 - Assigning permissions to the resources. Determine the number of users.
 - Showing auditing for various resources.
6. Demonstrate the installation and operation of network printer by:
 - Establishing a print device and sharing it on the network.
 - Managing the print devices and print queues.
 - Troubleshooting potential printer problems and suggesting ways to monitor and prevent printing problems.

COURSE REQUIREMENTS

All students are responsible for attaining competencies through completion of the following course requirements:

- attending class
- reading assigned material
- completing assigned exercises
- completing lab assignments
- completing all tests

ATTENDANCE POLICY

The attendance policy as stated in the York Technical College Handbook will be enforced. Makeup tests will not be given for theory tests. If a student must miss a theory test, he/she will get a zero for that test. However, students have the option of taking the comprehensive final. The student's grade on the comprehensive final will replace his/her missed theory test grade. It is the student's responsibility to schedule a time for a make-up hands-on test with his/her instructor.

ACADEMIC INTEGRITY

The policies stated in the York Technical College Handbook will be enforced. Any student violating the policy will be subject to academic discipline.

METHOD OF INSTRUCTION

The instructor will discuss the principles introduced in each chapter and demonstrate the methods described there. The student will reinforce this lecture material by reading the textbook as assigned. During this course, the student will be given opportunities to practice on a computer the skills being learned by doing lab assignments. These lab assignments will be vital in learning to use sample software packages, and the student should expect to spend time outside the class period as well as time given during class to complete this work. The student will have an opportunity to review solutions in class. Should a student need additional assistance, instructors will be available during their posted office hours.

GRADING SCALE

Module 1 Networking Concepts Installation	Theory Test(s) 60% Homework/Labs 40%	50% of Final Grade
Module 2 Monitoring and Managing Network Users & Troubleshooting	Theory Test(s) 60% Homework/Labs 40%	50% of Final Grade

EVALUATION STRATEGIES / GRADING PROCEDURE

A minimum of three tests and five labs will be given covering the above competencies. These tests and the lab work determine the final semester grade. Tests will count 60% of the grade, and labs, 40%. A minimum grade of C is required for students in computer technology programs.

If a student passes the current Microsoft Certification Exam after the course has begun and before the final exam is given, the student will exempt the final exam. Passing the Microsoft Certification Exam does not exempt the student from completing all labs, written module exams, and hands-on exams.

LETTER GRADE

A	90 - 100
B	80 - 89
C	70 - 79
D	60 - 69
F	Below 60

ENTRY-LEVEL SKILLS

The student must have keyboarding ability and know the fundamentals of the Windows operating system. The student must be able to read and comprehend the assigned material.

PREREQUISITES: None

CO-REQUISITES: IST 201 or IST 220

DISABILITY STATEMENT: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Office (SRO) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.