COURSE INFORMATION

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

DL 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 XP.
2. Demonstrate an understanding of 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.0
   - Demonstrating an understanding of the physical layer of a network, its topology, medium, and connections.
   - Constructing a UTP cable and test for correctness.
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:

- Developing an understanding of how to install Windows XP Professional.
- Create an unattended installation script for installing a prescribed set of options.
- Locating and utilizing the tools needed for an unattended installation.
- Developing an understanding of 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 XP Professional and other Windows systems.
2. Perform file and directory level sharing and security.
3. Setup a printer, establishing user rights and privileges for printing on a network.
4. Demonstrate methods to troubleshoot problems in Windows XP 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 setup 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 Catalog and Handbook* will be enforced. Attendance is required on test days unless the student has a doctor's excuse, death notice, etc., indicating an unusual circumstance for absence. If a student knows he/she must be absent on a test day, the student should make arrangements with the instructor to take the test before the absence.

ACADEMIC INTEGRITY

The policies stated in the *York Technical College Catalog and Handbook* will be enforced. Any student violating the policy will be subject to academic discipline. Anyone caught cheating will automatically get a 0 grade for the assignment.

EVALUATION STRATEGIES/GRADING PROCEDURE

This course is divided into two modules. Modules must be completed in order. Students may exempt any of the modules by completing both the theory and hands-on exam with a score of at least 80% on each exam. Below is a list of the modules:

Module 1	Networking Concepts Installation	30 Points
Module 2	Monitoring and Managing Network Users & Troubleshooting	30 Points
Final Exam	Comprehensive	30 Points
Other	Attendance and Participation	10 Points

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 70% of the grade, and labs, 20%. A minimum grade of C is required for students in computer technology programs.

If a student passes the Microsoft Certification Exam 70-210 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.

GRADING SCALE

Module 1Test	20%	A	90 - 100
Labs	10%	B	80 - 89
Module 2Test	20%	C	70 - 79
Labs	10%	D	60 - 69
Final Exam	30%	F	Below 60
Attendance & Participation	10%		
	100%		

ENTRY-LEVEL SKILLS

The student should be familiar with Windows95 environment. The student must be able to read and comprehend 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.