

COURSE INFORMATION

COURSE PREFIX/NO: IST 220
COURSE TITLE: Data Communications
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 is a study of the fundamentals of data communications. Basic signaling, networking and various transmission media are covered.

COURSE COMPETENCIES

Upon successful completion of the course, the student should be competent in performing the following tasks.

Module I: Data Communications Essentials

1. Explain basic data communications concepts including: requirements and rationale of data communication transmission methods; analog vs. digital, asynchronous vs. synchronous, parallel vs. serial transmission, standard interface methods such as broadband, baseband, 802.11, and fiber-optic systems.
2. Explain various communications lines and hardware components including: wire cable, wireless communication, fiber optics, microwave, infrared, hardware components, and terminals.

Module II: Networking Protocols, Operations, and Administration

1. Identify and explain components and transmission modes.
2. Identify and explain each of the following: network structures; LAN, WAN, Star, token ring, simplex, half-duplex, and full-duplex modes, time-division and frequency-division multiplexing.
3. Discuss basic network design and network protocols including: common carrier facilities, packet-switching networks, performance design considerations, error detection and correction, and various network access methods.

Module III: Network Troubleshooting

1. Design, install, and troubleshoot a peer-to-peer local area network.

COURSE REQUIREMENTS

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

- attending class
- reading assigned material
- completing assignments
- completing all unit tests

ATTENDANCE POLICY

The attendance policy as stated in the *York Technical College Catalog and 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 one comprehensive make-up test at the end of the semester. The student's grade on the comprehensive make-up test will replace his/her lowest

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 Catalog and Handbook* will be enforced. Any student violating the policy will be subject to academic discipline.

EVALUATION STRATEGIES/GRADING PROCEDURE

A minimum of four exams will be given. Several class projects and assignments will be given. The student must accurately complete all assignments.

GRADING SCALE

Module 1	Tests	10%	A	90 - 100
	Assignments	10%	B	80 - 89
			C	70 - 79
Module 2	Tests	15%	D	60 - 69
	Assignments	10%	F	Below 60
Module 3	Tests	15%		
	Assignments	10%		
Final Exam/Project		30%		

ENTRY-LEVEL SKILL

The student should be familiar with Windows 2000 environment. The student must be able to read and comprehend assigned material.

PREREQUISITES

None

COREQUISITES

CPT 114

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 the skills being learned by completing assignments.

This course is divided into three modules. Modules must be completed in order. Students may exempt any of the three modules by completing the module exam with a score of at least 80%.

Below is a list of the modules:

Module 1	Data Communications Essentials	20%
Module 2	Networking Protocols, Operations, and Administration	25%
Module 3	Network Troubleshooting	25%
Final Exam	Comprehensive	30%