
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 1: Data Communications Essentials

- Describe the basic components of a network
- Identify characteristics of network technologies
- Analyze the OSI model
- Identify wired network cables and connectors
- Identify network-to-network connection components
- Identify LAN wiring tests and equipment

Module 2: Networking Protocols and Operations

- Differentiate between basic internetworking devices and identify specialized internetworking devices
- Explain the function of hardware and software security devices
- Describe the TCP/IP Protocol suite
- Configure TCP/IP settings on client machine
- Identify the hardware components needed to create a wireless connection

Module 3: Networking Security

- Describe and explain common security threats
- Explain ways to mitigate security threats
- Secure an operating system and network devices
- Explain network authentication methods
- Explain the basic concept behind public key infrastructure
- Explain methods of remote access security
- Explain the methods to secure a wireless network

Module 4: Network Monitoring and Troubleshooting

- Monitor a data communications network
- Read event logs to monitor network activity
- Explain the basic troubleshooting steps and prepare toolkits for troubleshooting
- Troubleshoot the physical and logical network
- Implement a network troubleshooting methodology based on a given scenario

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 makeup 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 and Assignments – 15%	A 90 - 100
Module 2 Tests and Assignments – 15%	B 80 - 89
Module 3 Tests and Assignments – 20%	C 70 - 79
Module 4 Tests and Assignments – 20%	D 60 - 69
Final Exam/Project – 30%	F Below 60

PREREQUISITES: None

CO-REQUISITE: CPT 114

Disabilities 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.