

COURSE INFORMATION

COURSE PREFIX/NO:	IST 260
COURSE TITLE:	Network Design
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 processes and techniques required to identify the most attractive design solution of a telecommunications network—combining creativity, rigorous discipline, analysis, and synthesis—while emphasizing the solution in terms of cost and performance.

COURSE COMPETENCIES

Upon successful completion of this course, the student will be able to:

Module I – DHCP

- Describe the purpose of DHCP.
- Configure a DHCP server.
- Manage and monitor a DHCP database.

Module II – DNS

- Describe the name resolution process.
- Install and configure DNS.
- Describe DNS zones and zone transfers.
- Explain WINS and DNS integration.
- Use system logs to troubleshoot and monitor DNS.

Module III – Network Security

- Describe network security protocols used for authentication.
- Employ security configuration tools.
- Use the Encrypting File System and the Microsoft Baseline Security Analyzer.
- Explain the major concepts of IPSec and use tools to manage and monitor IPSec.
- Implement Windows Update and Automatic Updates.
- Implement and manage SUS.

Module IV – Routing and Remote Access

- Configure VPN, NAT, routing protocols, and routing tables.
- Monitor and capture network traffic.

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. Attendance is required on test days unless the student has a doctor's excuse, death notice, etc., indicating an unusual circumstance for absence. If you know you must be absent on a test day, make arrangements with the instructor to take the test before the absence.

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. Anyone caught cheating will automatically get a 0 grade for the assignment

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 microcomputer 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.

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 as described below. No makeup tests will be given. An optional final exam will take the place of the lowest test grade. A minimum grade of C is required for all students in computer technology programs.

GRADING SCALE

Module I	Tests 60% Homework/Labs 40%	Percent of Final Grade 25%
Module II	Tests 60% Homework/Labs 40%	Percent of Final Grade 25%
Module III	Tests 60% Homework/Labs 40%	Percent of Final Grade 25%
Module IV	Tests 60% Homework/Labs 40%	Percent of Final Grade 25%
Final Grade		100%

Letter Grades

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

ENTRY-LEVEL SKILLS

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

PREREQUISITES

IST 251 or IST 252 with a minimum grade of “C”

CO-REQUISITES

None required.

Revised: January 2008