

CIT 260—Network Hardware Installation and Troubleshooting (3)

Course Description

This course is designed to provide students with the knowledge and skills necessary to design, install, configure, and troubleshoot cabling systems and equipment used to connect a local area network. Lecture: 2 hours, lab: 2 hours. Prerequisites: CIT 160; or consent of instructor.

Course Competencies

Upon successful completion of this course, the student can:

1. Design a basic network layout using copper and/or fiber optic cabling systems
2. Terminate, test, and trouble shoot copper wire systems
3. Install and configure network interface cards and connection equipment
4. Use industrial standard testing and certification equipment.

Course Outline

- I. Introduction
 - A. Overview of Network Wiring
 - B. Overview of Network Hardware
- II. Copper Wire Plants
 - A. UTP
 - B. Category 3
 - C. Category 4
 - D. Category 5
 - E. CDDI
 - F. Termination Techniques
 - G. Plant Design and Layout
 - H. Testing and Certification
- III. Fiber Optics Plants
 - A. Different Cable Types
 - B. Termination Techniques
 - C. Design and Layout
 - D. Testing and Certification
- IV. Structured Wire Systems
 - A. Designing a Wire Plant for a Room
 - B. Designing a Wire Plant for a Building
 - C. Mixing Wire Types
- V. LAN Hardware
 - A. Overview of Ethernet and Token Ring
 - B. Types of NIC's
 - C. Types of Hubs
- VI. NIC's
 - A. Installing

- B. Configuring
- C. Testing
- D. Troubleshooting
- VII. Connection Equipment
 - A. Hubs
 - B. Switches
 - C. Configurations
 - D. Testing
 - E. Troubleshooting