

NET 125: Introduction to Networks

COURSE DESCRIPTION:

Prerequisites: None

Corequisites: None

This course introduces the architecture, structure, functions, components, and models of the Internet and computer networks. Topics include introduction to the principles of IP addressing and fundamentals of Ethernet concepts, media, and operations. Upon completion, students should be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

Course Hours per Week: Class, 1. Lab, 4. Semester Hours Credit, 3.

LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

- A. Build a simple local area network (LAN).
 - 1. Explain network technologies.
 - 2. Explain how devices access local and remote network resources.
 - 3. Implement basic network connectivity between devices.
- B. Perform basic configurations for routers and switches.
 - 1. Use command-line interface (CLI) commands to perform basic router and switch configuration and verification.
 - 2. Describe router hardware.
 - 3. Explain how switching operates in a small to medium-sized business network.
 - 4. Configure initial settings on a network device
- C. Implement IP addressing schemes.
 - 1. Design an IP addressing scheme to provide network connectivity for a small to medium-sized business network.
 - 2. Configure monitoring tools available for small to medium-sized business networks.

OUTLINE OF INSTRUCTION:

- I. Explore the Network
- II. Configure a Network Operating System
- III. Network Protocols and Communications
- IV. Network Access
- V. Ethernet
- VI. Network Layer
- VII. IP Addressing
- VIII. Subnetting IP Networks
- IX. Transport Layer
- X. Application Layer
- XI. Build a Small Network