

ETRO 140B : Cisco Networking 1

Credits: 3

Class Hours: 6 lecture/lab

Recommended: Basic computer and internet usage skills.

Description: This course introduces the architecture, structure, functions, components, and models of the internet and other computer networks. The principles and structure of IPv4 and IPv6 addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

Semester Offered: Fall

Course Student Learning Outcomes (CSLOs):

1. Identify and describe the devices and services used to support communications in data networks and the internet.
2. Explain fundamental Ethernet concepts such as media, services, and operations.
3. Utilize common network utilities to verify small network operations and analyze data traffic.
4. Use Cisco command-line interface (CLI) commands to perform basic router and switch configurations.
5. Identify and explain the role of protocol layers in data networks.
6. Explain and implement addressing and naming schemes at various layers of data networks in IPv4 and IPv6 environments.
7. Build a simple Ethernet network using routers, switches, and appropriate cabling.