COURSE DESCRIPTION

ITNW 1425

Prerequisites: None

Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software.

ITNW 1425 is a 4 credit hour course. (3 lec., 4 lab.)

WECM END-OF-COURSE OUTCOMES: Identify and use network transmission media; explain the OSI model; Identify the characteristics of network topologies and protocols; identify the functions of a network operating system and distinguish between centralized, client/server, and peer-to-peer systems; and distinguish between Local Area Networks (LANs) and Wide Area Networks (WANs) and identify the components used to expand a LAN into a WAN.

STUDENT LEARNING OUTCOMES:

Upon successful completion of ITNW 1425 Fundamentals of Networking Technologies, students will be able to:

- Write a one page research paper describing various computer network topologies
- Utilize equipment, protocols, and topologies to differentiate between various network systems
- Work in teams to install network hardware, software, and cable
- Troubleshoot network connectivity
- Configure network protocol; and install and configure network client software.
- Collaborate with three classmates about the importance of basic network security

COURSE MATERIALS


Other supplies may be required by the instructor.
A student of this institution (El Centro College) is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

**Major Course Requirements**

Students will participate in Discussion Board addressing topics in each chapter.

Students will complete the review questions in each chapter.

Students will complete hands-on projects in each chapter.

Students will complete Case Projects in each chapter.

Students will complete LabSim exercises.

Students will produce a Case Study Project paper.

- Networking
- OSI Model
- Transmission Basics
- Network Media
- Topologies
- Hardware
- TCP/IP
- Convergence
- Security
- Troubleshooting
- Integrity
- Network Management

A mid-term and final exam will evaluate the student's understanding of the fundamentals of Network+ concepts.

**Subject Matter**

Topics covered in the lecture portion of the course include:

- An Introduction to Networking
- Networking Standards and the OSI Model
- Transmission Basics and Networking Media
- Introduction to TCP/IP Protocols
- Topologies and Ethernet Standards
- Network Hardware
- WANS and Remote Connectivity
- Wireless Networking
- Networking Operating Systems
- Voice and Video over IP
- Network Security
- Troubleshooting Network Problems
- Ensuring Integrity and availability
- Network Management
- Network+ Examination Objectives
- Network Practice Exam
- Visual Guide to Connectors
Disclaimer
The provisions contained in this syllabus do not constitute a contract between the student and El Centro College. These provisions may be changed at the discretion of the Coordinator/Instructor. When necessary, appropriate notice of such changes will be given to the student.

The instructor-of-record may provide additional information to enhance the course to meet the needs of the enrolled students, provided that the enhancements do not conflict with the official course syllabus.

Policies
Students should click on the links below and read all of these policies.

General institutional policies
Course-related institutional policies