

University of Arkansas - Fort Smith
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CPSI 12433 Networking with Enterprise Devices

Credit Hours: 3

Lecture Hours: 1

Laboratory or other types of Hours:4

Prerequisite: None

Effective Catalog: 2021-2022

I. Course Information

A. Catalog Description

Covers the basic knowledge and skills to implement simple networks using enterprise equipment. Topics including the OSI network model, network topologies, transmission media, IP addressing and subnets, initial access and configuration of network switches, network routers and end devices as well as security of network devices. Introduces tools and utilities to facilitate network management.

II. Student Learning Outcomes

A. Subject Matter

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

1. Describe local area networks.
2. Explain the functionality of protocols used in networking and place them within the context of well-known layered reference models of network communications.
3. Analyze the pros and cons of utilizing various network technologies to meet a given set of customer requirements.
4. Access enterprise network devices for initial device security as well as perform network configuration to a specification.

B. University Learning Outcomes (ULO)

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills: Students will apply appropriate mathematical models to solve Internet Protocol addressing issues.

Global & Cultural Perspectives

Students will consider the demands of a global environment in producing networking solutions.

III. Major Course Topics

- A. Overview of networks as the foundation of communication and commerce
- B. Networking layer models
- C. Networking Media and characteristics
- D. Network switching, switchable addresses, and enterprise device configuration
- E. Routing, routable addresses, and enterprise device configuration
- F. Internet Protocol versions 4 and 6
- G. Application addressing and network ports
- H. Using enterprise network devices to build network infrastructure