

University of Arkansas - Fort Smith
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CPSI 21434 Configuring Network Devices

Credit Hours: 4

Lecture Hours: 2

Laboratory or other types of Hours:4

Prerequisite: CPSI 12433 Networking with Enterprise Devices

Effective Catalog: 2021-2022

I. Course Information

A. Catalog Description

Provides the basic knowledge and skills to implement network devices that provide efficient, high-availability networking. These technologies include switching, routing and wireless devices and their methods of implementation, configuration, security, and administration.

II. Student Learning Outcomes

A. Subject Matter

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

1. Design and configure an enterprise switch to operate as part of a small to large organizational network.
2. Design and configure a router to operate in a small company environment.
3. Design and configure a wireless access point(s) to operate in a small company environment
4. Identify and analyze small business requirements and utilize them to select, implement and administer network devices to create an effective, efficient network.

B. University Learning Outcomes (ULO)

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills: Students will identify a problem or issue, then generate solutions/analysis of problems/issues evaluated.

III. Major Course Topics

- A. Basic network device access and configuration
- B. Basic switching concepts
- C. Advanced switching using VLANs, Spanning Tree protocol, port bonding etc.
- D. Internet Protocol automatic addressing mechanisms
- E. Routing – Static and Dynamic
- F. LAN and Network Device Security
- G. Wireless Local Area Networking (WLAN) devices and concepts