

University of Arkansas – Fort Smith
5210 Grand Avenue
P.O. Box 3649
Fort Smith, AR 72913
479-788-7000

General Syllabus

CS 3233 Network Services

Credit Hours: 3

Lecture Hours: 3

Laboratory Hours: 0

Prerequisite: CS 3223 Routing and Switching

Effective: 2018-2019

I. Course Information

A. Catalog Description

Introduction to how organizations design and implement required services on a network infrastructure for all sizes of organizations. Students will design and implement complete organizational networks and then have several smaller projects to design/implement various network services within that network.

II. Student Learning Outcomes

A. Subject Matter

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

1. Design and implement basic network infrastructure services to create a functioning small network.
2. Design and implement various network services to extend network functionality to support changing organizational requirements.
3. Compare and contrast the design impacts of implementing software as a service, virtual desktop infrastructure, platform as a service and infrastructure as a service for organizational computing infrastructure.
4. Compare and contrast the organizational impacts of public cloud versus hybrid cloud versus private cloud network service implementations.
5. Evaluate the impact of the Internet of Things on network infrastructure design.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills: Students will identify and analyze performance and cost tradeoffs of networking service provisioning design decisions.

Communication Skills (written and oral)

Students will maintain an engineering log and summarize it into a report about their network services implementation(s) and present the findings to the class.

III. Major Course Topics

- A. Routing network infrastructure design and implementation
- B. Switching network infrastructure design and implementation
- C. Logical Addressing and Name Resolution Design
- D. Design and implementation of various network services
- E. Embracing and supporting mobility & BYOD
- F. Security / Business Continuity