

CSCE 416 - Introduction to Computer Networks

- **Credit Hours:** 3 hours
- **Contact Hours:** 3 lecture hours
- **Instructor:** Dr. Srihari Nelakuditi
- **Required Textbooks:** James F. Kurose and Keith R. Ross, *Computer Networking: A Top-Down Approach* (7th Edition). Addison-Wesley 2017.
- **Bulletin Description:** Concepts and components of computer networks and the Internet; network applications; network protocol stack.
- **Prerequisites:** CSCE 146
- **Required Course** in CE, CIS, and CS
- **Course Outcomes:** Students will be able to:
 1. Demonstrate an understanding of the elements of a protocol and the concept of layering.
 2. Describe how to control access to a shared channel by multiple stations
 3. Explain the concepts of error control, flow control and congestion control.
 4. Illustrate how a packet is routed over the Internet.
 5. Design, build and describe a client-server application.

- **Student Outcomes addressed by course**

Program	Student Outcomes Addressed
Computer Engineering	1, 2
Computer Information Systems	1, 2
Computer Science	1, 2

- **Topics covered**
 - Layered network architectures
 - Network programming interfaces (e.g., sockets)
 - Transport and data link protocols
 - Physical media
 - Local area networks
 - Network routing protocols