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* (8th Edition). Pearson 2021.
- **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**
  1. Layered network architectures
  2. Network programming interfaces (e.g., sockets)
  3. Transport and data link protocols
  4. Physical media
  5. Local area networks
  6. Network routing protocols
  7. Network security