CSCE 516: Computer Networks

- 1. Course number and name: CSCE 516: Computer Networks
- 2. Credit: 3-hrs; Contact: 3 lecture periods of 50 minutes or 2 periods of 75 minutes per week
- 3. Instructor: Nelakuditi
- 4. Textbook: Larry L. Peterson and Bruce S. Davie, *Computer Networks: A Systems Approach*, 4th edition, Morgan Kaufmann, March 2007.
- 5. Specific course information
 - a. Catalog description: Structure, design, and analysis of computer networks; ISO/OSI network architecture.
 - b. Prerequisites: STAT 509
 - c. CSCE 5xx elective
- 6. Specific goals for the course
 - a. Specific outcomes of instruction are that students will be able to:
 - 1. Demonstrate an understanding of IP based forwarding and routing in the Internet
 - 2. Discuss various actions by TCP for controlling congestion in the Internet
 - 3. Describe the operations of a station in accessing a wired LAN using Ethernet
 - 4. Explain how protocols for wireless and mobile networks differ from wired networks
 - 5. Evaluate the performance of a protocol and report the findings
 - b. As an elective this course cannot be counted upon to contribute to the attainment of any student outcome.
- 7. Topics covered and approximate weight (14 weeks, 4 hours/week, 56 hours total)
 - 1. IP Addressing and Forwarding
 - 2. Translating Addresses
 - 3. Link State and Distance Vector Routing
 - 4. Policy based Routing
 - 5. Link Layer and Local Area Networks
 - 6. Multicast Routing
 - 7. Wireless and Mobile Networks
 - 8. Transport Layer Protocols
 - 9. TCP Congestion Control
 - 10. Web Content Delivery