

Approval: 1st convocation adhoc

Course Name: Computer Networks
Course Code: CS 206
Credit: 3-0-0-3
Category:
Prerequisites: None

Course contents:

Part 1: Building a network; Goals; Requirements; layered network architecture; Physical media -- electrical, optical, wireless; Encoding; Framing; Network adapter; Error Detection; Reliable transmission

Part 2: Topology: Ethernet, Rings; Packet Switching; Forwarding; Bridges and LAN switches; Wifi

Part 3: Routing; Algorithms (Distance Vector; Link State); Addressing; IPv4 and IPv6; Internet; Multicast; (approx. 8 hrs)

Part 4: Transport protocols -- UDP, TCP; Network resource allocation -- Flow and Congestion Control; Quality of Service (approx. 8 hrs)

Part 5: Application layer -- Web, Email, DNS; Network security; Network management; Advanced topics: Wireless networks; Optical communications (approx. 8 hrs)

Note: Architectures, protocols, implementation and performance to be covered in all parts.

Textbooks:

1. Peterson & Davie, "Computer Networks: A Systems Approach"
2. A.S. Tanenbaum, "Computer Networks"