

CP 352 COMPUTER NETWORKS
CREDITS: 6 (L = 4, P = 2)

1. Introduction: Network objectives and applications; network structure and architecture; the OSI reference model; network services; network standardization; examples of networks. 4 Hrs
2. Physical layer: Fundamentals of data communication; transmission media; analog transmission; digital transmission; switching; ISDN; terminal handling. 6Hrs
3. Broadcast channels and medium access: LAN protocols; CSMA with collision detection; collision free protocols; IEEE standard 802 for LANs; comparison of LANs; fiber optic networks and FDDI. 6 Hrs
4. Data link layer: Design issues; error detection and corrections; elementary data link protocols; sliding window protocols. Examples. 6 Hrs
5. Network layer: Design issues; routing algorithms; congestion control; internetworking. Examples. 6 Hrs
6. Transport layer: Design Issues; connection management; example of a simple transport protocol. 6 Hrs
7. Session layer: Design issues; remote procedure call; examples. 2 Hrs
8. Presentation layer: Design issues; data compression and encryption; network security and privacy. Examples. 4Hrs
9. Application layer: Design issues; file transfer and file access; electronic mail; virtual terminals; other applications. 4 Hrs
10. Case study based on available network software. 2 Hrs

REFERENCE BOOKS:

1. Andrew S. Tanenbaum
Computer Networks
Prentice Hall of India
2. William Stallings
Local Networks
Maxwell Macmillan International Edition.
3. B.A.Forouzan
Data Communication And Networking.
Tata McGraw Hill