

II M.SC.(IT)	DATA COMMUNICATION AND NETWORKS	EPIT914S
SEMESTER-III		HRS/WK-4
ELECTIVE-IV		CREDIT-3

Objectives:

To enable the students to get acquainted with the basics of Networks and to make them concentrate on research side with respect to Networks.

Unit-I

Data Communication-Networks_ Protocol and Standards-Standard Organizations- Basic Concepts-Line Configuration –Topology-Transmission Mode-Categories of Networks – Internetworks –OSI Model-Layered Architecture.

Unit-II

Error Detection and Correction – Methods - VRC – LRC – CRC – Checksum - Hamming Code - LAN Architecture- Project 802-Ethernet-Token Bus-Token Ring-FDDI- Comparison.

Unit-III

Switching Concepts – Circuit Switching – Packet Switching - Message Switching - Routers-Gateways - Routing Algorithms - Distance Vector Routing - Link State Routing.

Unit-IV

Overview of TCP/IP – TCP/IP – Layered Architecture – Network Layer-Addressing – Subnetting – Other Protocols in the Network Layer ARP- RARP – ICMP- IGMP - Transport Layer- TCP- UDP.

Unit-V

Client/Server Model- BOOTP –DHCP – DNS – TELNET - FTP – TFTP – SMTP – SNMP – HTTP – WWW– Introduction to– ISDN- ATM .

TextBook:

1. “Data Communication and Networking” , Behrouz A. Forouzan, Second Edition , THM-2002.

Reference Books:

1. William Stallings, “Data and Computer Communications”, Prentice Hall of India,1997.
2. Larry L.Peterson, Bruce S.David, “Computer Networks-A Systems Approach”, Morgan Kauffman, 1996.
3. Douglas E.Comer, “Internetworking with TCP/IP-Volume I”,Prentice Hall of India,1997.
4. W.Richard Stevens,”TCP/IP Illustrated Volume I,II”,Addition Welsley,1999.
5. A.S.Tanenbaum,”Computer Networks”,Prentice Hall of India,1998.