

CS307 COMPUTER NETWORKS

Objective of the Course :

This course will focus on imparting knowledge about the aspects of data communication and computer network systems with the required basic principles behind them. To provide essential knowledge about the OSI model and TCP/IP model. To create a good foundation covering the physical, data link, network, transport and application layers.

UNIT - I

Introduction: Use of computer networks, network hardware, network software, reference models, example networks.

UNIT - II

Physical layer: Guided Transmission Media, The Data link layer: design issues, Error detection & correction, elementary datalink protocols, sliding window protocols.

Medium access control sublayer : The channel allocation problem, multiple access protocol.

UNIT - III

Network Layer: Design issues, routing algorithms, congestion control algorithms, quality of service, internet working, the network layer in the internet.

UNIT - IV

Transport layer: the transport service, elements of transport protocols, the internet transport protocols: UDP & TCP.

UNIT - V

Application Layer: DNS-Domain name system. The world wide web, Multimedia.

TEXT BOOK :

1. Andrew S Tanenbaum, "Computer Networks", 4th ed., Pearson Education, 2003.

REFERENCE BOOKS :

1. Behrouz A. Forouzan, "Data communications and Networking", 3rd ed., TMH, 2003.
2. William Stallings, "High Speed Networks & Internets", 2nd ed., Pearson Education, 2002.
3. William Stallings, "Data and Computer Communications", 7th ed., Pearson Education, 2004.
4. S.Kesav, "An Engineering approach to Computer Networking", 1st ed., Pearson Education, 1997.