

EE4204/EE4204E/TEE4204 Computer Networks
Lecturer: Assoc. Prof. Mohan Gurusamy

Subject description (Part 1)

Network requirements and architecture

Requirements: connectivity, cost-effective resource sharing, support for common services, performance. Classification: Access, Core, LAN, MAN, WAN, Switching: Circuit switching, packet switching. Performance: Delay and throughput. Architecture: layering and protocols, OSI architecture, Internet architecture.

Direct link networks

Links,. Framing. Error detection. Reliable transmission, Ethernet LAN, Wireless LAN.

Packet Switching

Switching and forwarding. Bridges and LAN switches

Reference books:

Peterson and Davie, “Computer Networks: A Systems Approach”, 5th Edition, *Morgan Kaufmann* (also other editions).

J.F. Kurose and K. W. Ross, “Computer Networking: A Top-Down Approach”, 7th Edition, *Pearson* (also other editions).

William Stallings, “Data and Computer Communications”, 6th edition, *Prentice Hall*, (also other editions).

S. Tanenbaum, “Computer Networks”, 5th edition, *Prentice Hall*, PTR. (also other editions).

Behrouz A. Forouzan, DeAnza College, “Data Communications and Networking,” 5th edition, McGraw Hill (also other editions).