

Title of the course: Networking

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References:

1. Networking the Complete Reference, 3rd Edition, by Bobbi Sandberg
ISBN: 9780071827645

Assessments:

Mid-term Exam	4 points
Final Exam	12 points
Class Activity	2 points
Attendance	2 points

Subjects to be discussed:

TOPICS	SESSIONS	OBJECTIVES
INTRODUCTION TO COMPUTER NETWORKS, NETWORK TOPOLOGIES	1st and 2nd sessions	<ul style="list-style-type: none">• What is a computer network and its benefits• Different computer network topologies and their advantages and disadvantages
OSI AND TCP/IP REFERENCE MODELS	3rd and 4th sessions	<ul style="list-style-type: none">• Different OSI layers and their applications• TCP/IP layers and their applications
PHYSICAL AND LOGICAL ADDRESSING	5th and 6th Sessions	<ul style="list-style-type: none">• What is a MAC address and how it is used• What is an IP address and subnet mask, Different classes of IPs• Sub-netting and its applications

**TCP AND UDP PROTOCOLS
AND SOME OTHER
IMPORTANT PROTOCOLS**

**7th and 8th
session**

- TCP protocol and its applications
- UDP protocol and its application
- Learning Important protocols such as SMTD, FTP etc.

**DIFFERENT ROUTING
PRORTOCOLS**

**9th and 10th
sessions**

- What are different routing protocols and how they work

**HTTP AND HTTPS
PROTOCOLS IN DETAILS**

**11th and 12th
sessions**

- What is http protocol
- http protocols method
- meaning of different codes
- What is https protocol

NETWORK PROGRAMING

**13th ,14th and 15th
sessions**

- Network programming using java language

NETWORK SECURITY

**16th ,17th and 18th
sessions**

- Network Firewall
- Best security approaches and practices
- Different types of attack such as DoS and DDoS