

COMPUTER NETWORKS
CS 45201
CS 55201

CHAPTER 0
Course Overview

H. Peyravi
Department of Computer Science
Kent State University
Kent, Ohio 44242
peyravi@mcs.kent.edu
<http://mars.mcs.kent.edu/~peyravi>

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Overview

What Is This Course About?

- Network architecture.
 - ▶ Principles and Concepts.
 - ▶ General-Purpose Computer Networks.
- Network protocols.
 - ▶ Internet Perspective.
 - ▶ LAN Perspective.
- Distinction between architecture and implementation.

What Is Not This Course About?

- Network building and usage.
 - ▶ We will not cover how to build/use Novell Network.
- Survey of existing protocol standards.
- Specialized networks.
- This is the first course in networking, we can't cover everything.
- Other courses.
 - ▶ CS 4/59995 Internet Engineering.
 - ▶ CS 6/75201 Interconnection Networks.
 - ▶ CS 6/75202 Adv. Computer Networks.
 - ▶ CS 6/75995 Wireless/Mobile Computing.
 - ▶ CS 6/75995 Sys. Model. & Performance Eval.
 - ▶ CS 6/75995 System Simulation.

Prerequisites

- CS 33001 Computer Organization.
- CS 4/55101 Computer Architecture.
- CS 33001 Data Structures.

Why You Should Not Take This Course

- You don't have the necessary background (prerequisites).
- You are not ready for the hard work \Rightarrow 10-15 hrs/week.
 - ▶ Reading the book and references.
 - ▶ Doing the homework.
- You want to learn how to set up a network.

Text and References

- Text: Larry Peterson and Bruce Davie, "Computer Networks A System Approach", 2nd Edition, Morgan Kaufmann, ISBN 1-55860-514-2.
- References:
 - ▶ Andrew Tanenbaum, "Computer Networks", 3rd Edition, Prentice Hall, ISBN 0-13-349945-6, 1996.
 - ▶ William Stallings, "Data and Computer Communications", 5th Edition, Prentice Hall, 1997.

Office Hours

- M 5:00–6:00 pm
T-R 8:30–9:00 pm and by appointment
peyravi@mcs.kent.edu
http://mars.mcs.kent.edu/~peyravi
- 262 MSC,
- Phone 672-9062 (off-campus) 2-9062 (in-campus).
- Graduate teaching assistant \Rightarrow will be announced soon.

Course Evaluation

- First Exam (50%) \Rightarrow June 28, 2001
- Final (50%) \Rightarrow July 14, 2001

Frequently Asked Questions

- Do I give make up tests?
 - ▶ No, a student can not skip a test unless (s)he has a justifiable excuse with proper documentation.
- Do I curve your grade?
 - ▶ Your grade depends on the performance of the rest of the class.
- *Any other question?*

Where Are We Headed?

OSI Ref Model	TCP/IP Protocol Stack						TCP/IP Ref. Model	To be covered
Application	FTP		HTTP		NV		Application	MPEG JPEG Security
Presentation	Real-time							
Session	TCP						Transport	TCP UDP Congestion control Traffic Management
Transport	UDP							
Network	IP						Internetworking	IPv4/IPv6 Routing Switching ARP Forwarding
Data Link	Ethernet	Token Ring	FDDI	Packet Radio	ATM		Host-to-Network	Framing MAC protocols Encoding Error detection
Physical								

- We cover this course bottom-up.