CIS 677
Computer
Networks

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These slides are available on-line at:

http://www.cse.wustl.edu/~jain/cis677-00/

Overview

- How
- What
- When
- Why

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Overview

❑ How am I going to grade you?

❑ What are we going to cover?

❑ When are you going to do it?

❑ Why you should not take this course?

Grading

❑ Quizzes (Best 2 of 3)   50%

❑ Class participation   10%

❑ Homeworks   25%

❑ Labs   20%

❑ Note: Labs require programming in C

Frequently Asked Questions

❑ Yes, I do use "curve". Your grade depends upon the performance of the rest of the class.

❑ All homeworks are due at the <u>beginning</u> of the next Thursday class.

❑ All late submissions must be <u>preapproved</u>.

❑ All quizzes are open-book and <u>extremely</u> time limited.

❑ Quizzes consist of numerical as well as multiple-choice (true-false) questions.

❑ There is <u>negative</u> grading on incorrect multiple-choice questions. Grade: +1 for correct. -1/(n-1) for incorrect.

❑ Everyone including the graduating seniors are graded the same way.

Textbook

❑ William Stallings, "Data & Computer Communications," **Sixth Edition**, Prentice-Hall, ISBN 0-13-084370-9, **1999**.

❑ Note: There is a significant difference between fifth and sixth editions

Prerequisite

❑ CIS 675: Computer Architecture
- ❑ Memory
- ❑ System bus
- ❑ Interrupt
- ❑ Power
- ❑ Voltage
- ❑ Current
- ❑ Peak and RMS values
- ❑ Sine curve
- ❑ Amplitude, Frequency,. Phase

❑ CIS 459.21: C Programming

Tentative Schedule

3/30/00   Course Overview

3/31/00   Intro to Network Architecture and Protocols

4/6/00   Data Transmission

4/7/00   Datalink Control

4/13/00   Datalink Control (Cont)

4/14/00   **Quiz 1**

4/20/00   Packet Switching

4/21/00   LAN Systems

4/27/00   LAN Systems (cont)

4/28/00   Bridges

Tentative Schedule (Continued)

5/4/00	IP
5/5/00	**Quiz 2**
5/11/00	TCP
5/12/00	IPv6
5/18/00	ATM
5/19/00	ATM Traffic Management
5/25/00	Last Lab Due
5/26/00	**Quiz 3**
6/1/00	Last class
6/2/00	Graduating Seniors Grades Due

What Is This Course About?

❑ This is a course on Networking <u>Architecture</u>

❑ This is <u>not</u> a course on network building or usage

❑ You will be able to understand protocols

❑ You will <u>not</u> be able to build or use a Novell Netware network

❑ An example of the difference between architecture and implementation is the computer architecture course and a course on Intel Pentium Chip.

❑ An example of the difference between implementers and users is that of Pentium chip designers and the rest of us.

What Is This Course About? (Continued)

❑ You will learn about networking concepts that will help you understand networking jargon:
- ❑ TCP/IP
- ❑ Window Flow Control
- ❑ Cyclic Redundancy Check
- ❑ Parity
- ❑ Start and Stop Bits
- ❑ Baud, Hertz, and Bits/sec
- ❑ Algorithms for determining packet routes

❑ This is the <u>first</u> course on networking.
We cannot cover everything in 10 weeks.

Why You Shouldn't take this course?

❑ You aren't ready for the hard work

❑ You don't have 15 hours/week

❑ You don't have the background

❑ You just want to sit and listen

❑ You are not ready to take the initiative
Only key concepts will be covered in the class.
Students are expected to read the rest from the book.

❑ This does not cover what you want

Office Hours

❑ Thursday: 2:30 to 3:00 PM
  Friday: 2:30 to 3:00PM

❑ Office: 297 Dreese Lab, 2015 Neil Ave

❑ No office hours on 10/20, 12/1, 12/3

❑ Grader: Arjan Durresi, DL299, Durresi@cis.ohio-state.edu

❑ Grader's Office Hours: M/Tu/W 2:30 to 3:00PM

Summary
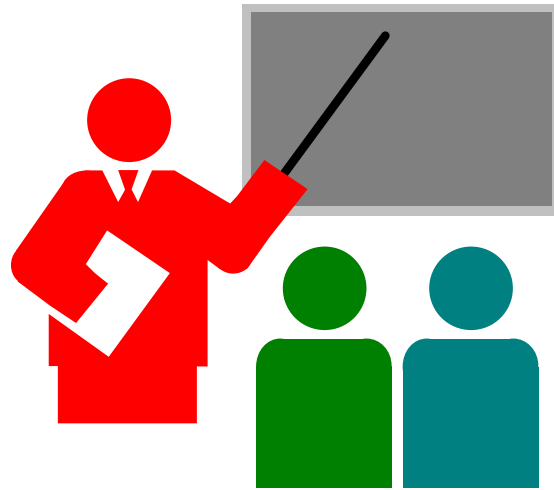
❑ There will be a lot of self-reading

❑ Goal: To prepare you for a career in networking

❑ Get ready to work hard

Quiz 0: Prerequisites

True or False?

T F

      A system with 32kB memory can hold only 16000 ASCII characters

      An example of an I/O bus is PCI which connects a Pentium processor with its memory.

      An example of a system bus is SCSI which connects a PC system with its disks.

      Interrupts are used by CPU to stop an ongoing I/O.

      A DC current of 4 Ampere at 5 Volts will require 4/5 Watts of power

      An RMS value of 100 Volts is equivalent to a peak value of 141.4 V.

      For $I = A \sin(2\pi ft + \phi)$, the amplitude of the current I is A

      For $I = A \sin(2\pi ft + \phi)$, the frequency is f.

      If x is 0, then after x++, x will be 1.

Marks = Correct Answers _____ - Incorrect Answers _____ = _____