CS320 - Internetworking Syllabus

Semester	Fall 2006
Class Sessions	Tuesday and Thursday, 3:30 - 4:45
Class Location	Gullickson Hall - Room 206A
Catalog Description	Principles and issues in interconnecting multiple physical networks into a coordinated system, operation of Internet protocols in the interconnected environment, and design of applications to operate in this environment.
Prerequisite	CS 210 – Algorithm Analysis and Design
Credit Hours	3
Textbook	Tanenbaum, Andrew, Computer Networks 4e, Prentice Hall
ISBN	0-13-066102-3

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Office Hours	Posted on office door

Grade Components

30%	Programs and Homework
20%	Lab Exercises
20%	Mid-term Exam
25%	Final Exam
5%	Class Attendance & Participation

Grade Scale

A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

Schedule of Topics

This is the approximate schedule of topics, subject to change as we progress through the semester.

Week	Tue	Thu	Reading Assignment
1	22-Aug Course Introduction Introduction to Networks	24-Aug	Ch 1: 3 – 76
2	29-Aug The Physical Layer	31-Aug	Ch 2: 85 – 152
3	05-Sep	07-Sep Data Link Layer	Ch 2: 153 – 177 Ch 3: 183 – 229
4	12-Sep	14-Sep Medium Access Control	Ch 3: 229 – 242 Ch 4: 247 – 251
5	19-Sep	21-Sep	Ch 4: 251 – 317
6	26-Sep	28-Sep	Ch 4: 318 – 336
7	03-Oct	05-Oct Mid-term Exam	
8	11-Oct Network Layer	12-Oct	Ch 5: 343 – 418
9	17-Oct	18-Oct	Ch 5: 418 – 472
10	24-Oct Transport Layer	26-Oct	Ch 6: 481 – 532 Ch 7: 579 – 610
11	31-Oct Application Layer	02-Nov	Ch 7: 611 – 674
12	07-Nov Network Security	09-Nov	Ch 7: 674 – 711 Ch 8: 721 – 752
13	14-Nov	16-Nov	Ch 8: 752 – 827
-	21-Nov Thanksgiving Break	23-Nov Thanksgiving Break	
14	28-Nov	30-Nov	
15	05-Dec Last Class	07-Dec	
-	12-Dec Final Exam 3:30 – 5:30	14-Dec	

Measureable Student Learning Outcomes

A high course grade in CS 320: Internetworking requires that the student demonstrate most or all of the following:

- Explains the structure of OSI reference model and its significance.
- Describes architectures for internetworking and their implementation issues.
- Demonstrates the role of TCP as a transport layer and its implementation.
- Demonstrates the role of UDP as a transport layer and its implementation.
- Given the computing environment of an organization, performs network design including address assignment.
- Demonstrates how SNMP is used for measuring network traffic and application monitoring.
- Demonstrates knowledge of developing Internet-based applications using the TCP/IP framework.
- Explains network security mechanisms and vulnerabilities.

Course Policies

Attendance

Students are expected to attend all class sessions and participate in class activities. Students are required to take exams at the scheduled class period. Students may take an exam at a different time under one of the following conditions:

- They present a University Excused Absence
- They present a valid medical excuse
- Other extraordinary circumstance as determined by the instructor

Academic Conduct

Learning about programming is a hands-on activity, not something that you can pick up by just reading a book or listening to a lecture. It is important that you do the work yourself to gain this experience. To that end, you may discuss programming concepts and techniques with others, consult the web or other textbooks, or study code that is available from various sources but the work you submit must be your own. Here are some examples of appropriate and inappropriate conduct:

- You need to insert an IF statement in your program and you can't remember whether or not parentheses are required. You ask a friend who says, yes, they are required. This is acceptable.
- You're running late on an assignment and in order to hand a program in on time, you copy ten lines of code from a classmate. This is NOT ACCEPTABLE conduct by either student: you must neither directly copy code from someone else nor offer your code to another student or allow it to be copied.
- After struggling for some time, you do a search on the internet and find a snippet of code that you adapt to your problem and insert into your program. You comment your code to acknowledge the source. This is acceptable.
- After struggling for some time, you do a search on the internet and find a program that does exactly what you need. You submit it as your own work. This is NOT ACCEPTABLE.

It is your responsibility to satisfy the spirit of this conduct. If you have any questions, please ask one of the instructors for clarification. Depending on the severity of the offense, the instructors may:

- Take no action
- Penalize the student on the assignment in question
- Assign the student a failing grade in the course

Communication

Assignments, lecture notes, class communications (e-mail), etc, are all handled via the course WebCT/Vista site. Be sure to log into WebCT/Vista regularly to check for course news.

Late Homework

Homework and programming problems will be assigned during the semester. Assignments submitted after the due date will be assessed a late fee.

Modified 20-Aug-06