Computer Science / Electrical Engineering 461: Computer Networks

Instructor: Neil Spring

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Office: Sieg 226c, Hours: M: 11:30-12:30, W: After class, by appointment.

TA: Richard Dunn

TA Office Hours: TBA: Check the web page.

Course Web: `http://www.cs.washington.edu/461`

Mailing List: Send mail to `majordomo@cs.washington.edu` with the contents `subscribe cse461` as soon as possible. Updates and bugs in programming assignments will be distributed by the mailing list.

Textbook: *A Systems Approach to Computer Networking*, by Larry Peterson and Bruce Davie, 2nd edition. $80.

Course Description: This course covers the basics of networking, ranging from the electrical signals on wires to high level transport protocols with congestion control. We will cover framing, error correction, switching fabrics, queuing, addressing, packet and circuit switching, forwarding, routing, collision detection, ethernet, IP, distance vector and link state routing, signalling, differential services, transport protocols, congestion control, TCP mechanisms, unreliable transports, caching, remote procedure call, security and authentication, and multicast communication.

Homework: There will be four homeworks, each worth 7.5% of your grade. Homeworks will be due at the end of class on:

Friday, October 6
Friday, October 20
Friday, November 10
Friday, December 1

Programming Assignments: Your programming assignments will include writing a program to turn in your future assignments, then implementing a routing protocol and a transport protocol on a virtual (simulated) network.

There are three programming assignments, each worth 10% of your grade. These assignments must be turned in before the class meets. Don't put them off until the last minute: they get progressively harder.

The goal of these projects is for you to understand the complexity behind some of the fundamental networking algorithms. You will work in pairs, so find a partner whose strengths complement yours.

Project deadlines are:

Friday, October 13
Friday, November 17
Wednesday, December 6

If you feel that the programming assignments will be too demanding on your programming talents and would prefer a term paper of comparable effort, please see me - I would prefer for you to be successful. Similarly, if you think the assignments are going to be beneath (too easy for) you, I would also prefer that you not be bored. We should be able to come up with something sufficiently "real" for you to be motivated.

Midterm: There will be one midterm, Friday, October 27. It will be held in class, and is worth 15% of your grade. Points are distributed between multiple choice, short answer, and long answer problems. None of the questions are easy, so it should be worthwhile to study your notes.

Final: There will also be a comprehensive final, worth 25% of your grade. (around 5% on the first half of the quarter, 20% on the rest) Points are distributed between multiple choice, short answer, and long answer problems. The final will be held Wednesday, December 13.

Grading Summary:

3 Project Assigments	30%
Final	25%
4 Homeworks	30%
Midterm	15%

Late Policy: For homeworks, you may turn in the homework on the Monday following the homework due date, only once during the quarter. For example, if you turn in your first homework late, no further late homeworks will be accepted. Homework will be due at the end of class. *Once we leave, it's late.*

For project assignments, 20% of your credit will be reduced per day it is late. Plan ahead.

Cheating Policy:

Since there's a minority of you who aren't familiar with what is and what is not cheating, DO: share ideas, write on whiteboards, tell each other when you don't understand, etc. DON'T: look at each other's monitors or printouts, or look through other's home directories for their files. We can tell when code looks too similar to be independent work, but we can't always tell who actually did the work and who didn't, so protect your own work too.