

CSCI 373: *Applications of Networking*

General information

The instructor for *CSCI 373* is Dean Brock. The course will meet on Tuesday and Thursday from 9:25 AM to 10:40 AM.

The textbook for the course is Andrew Tanenbaum's *Computer Networks*, published by Prentice-Hall (ISBN 0-13-162959-X). We will be using the second edition, which differs significantly from the first. In the course we will study networking concepts *and* several widely used network architectures. We will cover the following topics, listed below with related sections of the textbook and expected number of class periods:

OSI reference model	Chapter 1	2 classes
Transmission media (coax, fiber, etc.)	Section 2.2	2 classes
Telephones and modems	Section 2.3	1 class
Circuit and packet switching	Section 2.5	1 class
ISDN	Section 2.6	1 class
Ethernet (802.3)	Section 3.4.1	1 class
Token ring (802.5)	Section 3.4.3	1 class
Fiber (FDDI)	Section 3.5.1	1 class
Data link protocols	Sections 4.3 and 4.4	3 classes
Internetworking	Section 5.4	2 classes
Examples of network layers	Section 5.5	2 classes
Transmission Control Protocol (TCP)	Section 6.4.2	2 classes
Remote procedure calls	Section 7.2	1 class
Cryptography	Section 8.4	1 class
Network applications	Section 9.1	1 class
File transfer	Section 9.2	1 class
Electronic mail	Section 9.3	1 class
Internet Protocol (IP) applications	Section 9.6.2	1 class
USENET applications	Section 9.6.4	1 class

Although you are only required to read those sections of the book that we cover in class, you will find it useful to read the entire book, and I'll hope you'll do so during the semester. The September 1991 issue of *Scientific American* is a special issue on "Communications, Computers and Networks." Many of the articles in that issue would be good background reading for the course.

Grades will be based on a combination of graded homework and exams, two in-class exams and one final. In the weighing of graded material for the assignment of final grades, homework will count one-third, the in-class exams, one-sixth each, and the final exam one-third. The first in-class exam will be in the first week of October. Most likely, the second in-class exam will be the week before Thanksgiving. The final exam is scheduled for Thursday, December 19, 9:25 AM to 11:55 AM.

Most homework will be problems chosen from the textbook. One homework assignment will be a written review of a networking article. If a significant portion of the class has had experience with the C programming language or the Unix operating system, there will be one or two programming assignments. Students in the class will receive accounts on UNCAVX; however, any programming would be done on the department's Unix computers.

Beginning of Soap Box lecture

If you're a Junior in Computer Science and aren't a C guru, it's time to become one!

End of Soap Box lecture

My office hours are Tuesday, Wednesday, and Thursday from 1:30 PM to 3:00 PM. However, I do frequently read electronic mail and sending a message to my computer account, `brock@cs.unca.edu`, is generally the best way to get a prompt response. If the electronic mail address `brock@cs.unca.edu` looks unusual to you, you need to take a course in networking applications.