COLBY COLLEGE
Computer Science Department

CS398—Networks **Allen B. Downey**
Spring 2000

Syllabus

Professor: Allen B. Downey (downey@colby.edu)

Office: Mudd 417, x3672

Class time: Tuesday and Thursday from 1pm to 2:30pm in Mudd 416.

Textbook: Peterson and Davie, *Computer Networks: a Systems Approach*, Second Edition, Morgan Kaufmann.

Class-related email: I don't use a Macintosh or any Microsoft products, so please don't send me attached documents in formats other than plain text.

Web page: The handouts that I produce (as opposed to the ones I photocopy from other sources) will be available from the class web page. The URL is http://rocky.colby.edu/cs398

1 Coursework

Work in this class will include readings from the textbook and from additional sources I provide, a roughly-weekly series of written homeworks, quizzes, three in-class exams, a two-hour final exam, and in-class activities.

The total course load is intended to be 12 hours per week (including class time); the load should be spread evenly across the semester.

Grading: Final grades are primarily determined by exams, homeworks and quizzes. Class participation can also affect the final grade by up to a full letter.

Exams: The exams are scheduled for February 24, March 16 and April 13. The final exam is scheduled for exam period 8. There will be no makeup exams for any reason. If you miss one exam for an extremely legitimate reason, your final grade will be based on the other two exams. If you miss an exam without a legitimate reason, you will receive a zero. If you miss two exams for any reason, you cannot pass the class.

Quizzes: There will be a number of in-class quizzes during the semester, usually for 10-20 minutes at the beginning of a class session. There will be no makeup quizzes for any reason, but at the end of the semester I will drop each student's lowest quiz score.

Assignments: There will be weekly assignments, usually due on Tuesdays. Some will involve written exercises, and will generally be done individually. Some will involve programming exercises, and may be done in small groups.

In each case, I will make it clear what kinds of collaboration are acceptable. In all cases, it is unacceptable to present someone else's work as if it were your own. Unless stated otherwise, I will assume that all work you hand in is yours and yours alone. If you work with another student, you must acknowledge that student's contribution in writing on your assignment. If you get help from me or a TA that constitutes a significant part of the assignment, you should acknowledge that, too. If you are not sure, err on the side of caution.

2 Approximate calendar of topics

We will be following the order of presentation in the book for the most part. The book is organized as a series of engineering problems and a spectrum of solutions to each. The problems include:

Chapter 1: What are the fundamental capabilities of a network, and what behavior do we expect from a network?

Chapter 2: How can we get data from one machine to another?

Chapter 3: How can we move data on networks without direct connection between communicating hosts.

Chapter 4: How do we handle heterogeneous internets?

Chapter 5: How do we get processes to talk to each other?

Chapter 6: How can we allocate network resources to competing data flows?

Chapter 7: How do we communicate about the semantics of data (meta-data)?

Chapter 8: How do we protect privacy, verify authentication, and preserve the integrity of data?

Chapter 9: How do we handle applications with special requirements?