Course Information

Lecturer:	Charles E. Leiserson cel@mit.edu	NE43-202	3-5833
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World Wide Web:	http://theory.lcs.mit.edu/classes/6.892		
Ftp:	ftp://theory.lcs.mit.edu/pub/classes/6.892		

1 Requirements

Algorithmic maturity, probability, and programming experience.

2 Lectures

Lectures will be held in Room 36-144 on Tuesdays and Thursdays from 9:30 A.M. to 11:00 A.M. You are responsible for material in lectures, including oral comments made by the lecturer.

3 Handouts

Handouts will generally be available at the beginning of lecture. In order to keep your handouts organized, get yourself a loose-leaf notebook for use with the course. All handouts will be distributed on standard three-hole punched paper.

If you fail to obtain a handout in lecture, the 6.892 web page will provide a postscript version that you can print yourself. You can obtain handouts that are not available in postscript from the course secretary Irena Kveraga in Room NE43-201.

4 Grading

Your course grade will be based on 3 problem sets on theoretical material, 3 programming laboratories using the Xolas parallel computing facility, occasional scribing of lectures, and 1 term project. No exams.

This grading policy is subject to change at any time for any reasonable reason.

5 Problem sets

The course outline, Handout 2, shows the schedule of assignments and due dates that we expect, but the actual due date will always be on the problem set itself.

Each problem should be done on a separate sheet (or sheets) of three-hole punched paper. Mark the top of each sheet with: your name, 6.892, the problem number, and the date.

You should be as clear and precise as possible in your write-up of solutions. Understandability of your answer is as desirable as correctness. Moreover, how well you *communicate* your solutions to the course staff is important as well. For example, a simple, direct analysis is worth more points than a convoluted one, both because it is simpler and because it is easier to read and understand. Sloppy answers will receive fewer points, even if they are correct, so make sure that your handwriting is legible. It is a good idea to copy over your solutions to hand in, which will make your work neater and give you a chance to do sanity checks and correct bugs.

6 Laboratories

The three laboratories will be done on the Scout (Connection Machine CM5) and Xolas (Sun Enterprise 5000) facilities in the Laboratory for Computer Science. Labs will be done in groups of 1, 2, or 3 people. You may form your own groups.

7 Term project

A term project of theoretical or practical merit must be completed by the end of the term. The term project will require an in-class presentation.

8 Scribing

Part of your grade for the term will be based on the scribing of lecture notes in LaTeX. The number of times you scribe will depend on the number of people in the class. If two lectures are coordinated, the two scribes may write up the notes together. Extra credit will be awarded to students who scribe more than their fair share. You should use the LaTeX macros for lecture notes that are available from the ftp directory.

9 Describing algorithms

You will be called upon often to "give an algorithm" to solve a certain problem. Your write-up should take the form of a short essay. A topic paragraph should provide an executive summary stating what problem you are solving and what your results are. The body of your essay should provide the following:

1. An English description of the algorithm.

2. An example, a diagram, or pseudocode to show more precisely how your algorithm works.

3. A proof (or indication) of the correctness of the algorithm.

4. An analysis of the running time of the algorithm.

Remember, your goal is to communicate. We will take off points for convoluted and obtuse descriptions.

10 Collaboration

The goal of homeworks is to give you practice in mastering the course material. Consequently, you are encouraged to collaborate on problem sets. In fact, students who form study groups generally do better on exams than students who work alone. If you do work in a study group, however, you owe it to yourself and your group to be prepared for your study group meeting. Specifically, you should spend at least 30–45 minutes trying to solve each problem beforehand. If your group is unable to solve a problem, talk to other groups or visit the TA during office hours.

Whether you collaborate or not, however, you must write up solutions on your own. If you obtain a solution through research (e.g., through library work), acknowledge your source, but write up the solution in your own words.