CSC 364H1Y: Computational Complexity and Computability
Section L5201 — Summer Session 2002
Course Information

Instructor

Richard Krueger e-mail: `krueger@cs.toronto.edu`

Web Page `http://www.cs.utoronto.ca/~krueger/csc364h/`
The web site is the primary source of information about the course, including assignments, notes, mark lists and other announcements.

Newsgroup `ut.cdf.csc364h`
Please use the newsgroup for most questions you have concerning the class. Generally, if you have a question on a general subject, most of the class probably has the same question. Please limit your emails to personal issues, questions on your specific solutions, or other topics which you do no wish to make public.

Lecture Hours

Wednesdays 6:00pm–8:00pm in room BL 205.
(First lecture on **May 15** — last lecture on **August 7**.)

Tutorial Hours

Wednesdays 8:00pm–9:00pm: (First tutorial on **May 15**.)
- Spyros Angelopoulos in room BL 113 for students with last names from **A** to **G**,
- Ying Zhu in room RW 142 for students with last names from **H** to **M**,
- Babak Farzad in room RW 229 for students with last names from **N** to **Z**.

Office Hours

Mondays 5:00pm–6:00pm and Thursdays 1:00pm–2:00pm in room SF 2110.

Textbooks

Required: Cormen, Leiserson, Rivest and Stein. *Introduction to Algorithms* (2nd edition)

Recommended: Sipser. *Introduction to the Theory of Computation*

Optional: Garey and Johnson. *Computers and Intractability: A Guide to the Theory of NP-Completeness*

Marking Scheme

Component	Total Weight	Dates
3 Homework Assignments (4% each)	12%	June 13, July 11, August 1
4 Quizzes in Tutorial (4% each)	16%	May 29, June 12, July 10, July 31
2 Midterm Tests (16% each)	32%	June 19, July 17
1 Final Exam	40%	August 12-16

NOTE: To pass the course, students must obtain a minimum mark of 35% on the final exam.

Course Organization

The course is divided into three parts, covering the following topics.

- Computability Theory – What is a computer? How do we model computation? What are things we can and cannot compute?
- Efficient Algorithm Design – What techniques can we use to solve problems efficiently? When do they work? When do they not work?
- Complexity Theory – What are complexity classes? How do we show problems are easier or harder than other problems?

This is basically the order in which the topics will be covered. Each section will roughly compose a third of the course, each taking about 4 weeks to cover.

Homework: Each week a number of problems will be assigned relating to the course material. You will be expected to complete some of the problems to be handed in and graded. These problems will compose assignments throughout the term. Some problems will be assigned yet not form part of the assignments. You are encouraged to work on these problems and solve them, as they will further your understanding of the material (and may appear on quizzes!).

Quizzes: Occasionally a quiz will be held in the tutorial session. One (or a few) of these weekly assigned problems, or a closely related problem, will be asked. The quizzes will be closed book and presume you know how to solve the assigned problems.

Grading: Most of the problems in this course will involve proofs or counterexamples. Answers must be concise, clear, well thought out and presented neatly to obtain full marks. Marks will be deducted for overly long, rambling, sloppy or unclear answers, at the grader's discretion.

Fifth Rule: It is important to know both how to solve problems and when one does not know how to solve a given problem. Hence incorrect answers may be given zero credit, whereas if you recognize that you cannot solve a problem and state only "I don't know the answer," you will be given one fifth (20%) credit on the problem.

Lateness, Absence and Extensions: Late assignments will generally not be accepted. In the case of a missed quiz or test, a mark of zero will be recorded. No make-up quiz or test will be provided. Only in exceptional circumstances will requests for extensions for assignment deadlines or excuses for missed tests be entertained. Any such request must be presented to the course instructor (not a TA) with all supporting documentation as soon as possible.

Remarking: Any dispute over the grading of an assignment or test should be stated *in writing* and submitted along with the original copy of your work. Disputes can be taken to the instructor only if the grader's reply is not satisfactory.

Plagiarism (Collaboration in Homework)

The work you submit must be your own. Plagiarism is a form of academic fraud and is treated very seriously. You may discuss general approaches to assignments with others, but you should not leave such discussions with any written material provided by or copied from another person. In particular, the actual writeup of your assignment must be done in isolation from others. It is *not* difficult for the graders to detect undue collaboration. Note that it is a serious offense to help someone commit plagiarism. If you are unsure whether an activity may constitute plagiarism or undue collaboration, consult the instructor immediately.
Do not lend your assignment or let others copy it.