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Course Information
CSC 363H1Y: Computational Complexity and Computability
Section L5101 — Summer 2006

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Instructor

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

Web Site   `http://www.cs.utoronto.ca/~krueger/csc363h/`

The web site is the primary source of information about the course, including assignments, notes, marks and announcements. You are responsible for all announcements posted to the course web site, so please check it regularly.

Newsgroup   `ut.cdf.csc363h`

Please use the newsgroup for most of your course-related questions. If you have a question on a general subject, most of the class probably has the same question. Use email for personal issues or questions on your specific solutions.

Lectures

Tuesdays, 6:00pm–8:00pm in room SF 1101
(First lecture on **May 16** — last lecture on **August 8**.)

Tutorials

Tuesdays, 8:00pm–9:00pm   (First tutorial on **May 16**)

- in room BA 1210 for students with last names from **A** to **L**,

- in room BA 1220 for students with last names from **M** to **Z**.

Textbooks

Michael Sipser, *Introduction to the Theory of Computation*, 2nd edition, Thomson Course Technology, 2006. ISBN: 0-534-95097-3.

The textbook will be used for readings and exercises throughout the term.
See the course web site for some additional references.

Marking Scheme and Schedule

Item	Deadline	Weight	Item	Date(s)	Weight
Assignment 1	Jun 8	10%	Term Test 1	Jun 20	10%
Assignment 2	Jun 29	10%			
Assignment 3	Jul 20	10%	Term Test 2	Jul 25	10%
Assignment 4	Aug 10	10%	Final exam	Aug 14–18	40%

NOTE: To pass the course, students must obtain a minimum mark of 40% on the final exam.

Course Topics

The following topics will be covered, in the order listed.

- Computability [6 weeks] — (Chapters 3, 4, 5 in the textbook): Turing machines and other models of computation; the Church-Turing thesis; decidability and semi-decidability (recognizability); diagonalization; non-decidability and the Halting problem; reducibility.
- Complexity [7 weeks] — (Chapters 7, 8, 10 in the textbook): models of efficient computation; P and NP; NP-completeness, Cook's theorem; self-reducibility and polytime transformations; space complexity and other complexity classes.

Course Policies

20% Rule: For the term tests and final exam, you will receive 20% of the marks on each question (or part of a question) where you answer "I don't know" and nothing else. This is a way to encourage you to be aware of (and honest about) your level of understanding, and to discourage random guessing. This rule does not apply to assignments, where you have the time (and the responsibility) to ask questions and learn how to solve each problem.

Homework: Textbook readings will be assigned prior to each class, and should be completed before lecture. Homework assignments should be submitted directly into the course drop box by the specified due time.

Lateness, Absence and Extensions: Late assignments will generally not be accepted. In the case of a missed test, a mark of zero will be recorded. No make-up test will be provided. Only in exceptional circumstances will requests for extensions for assignment deadlines or excuses for missed tests be entertained. Any request for special consideration 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.

Plagiarism (Collaboration in Homework)

The work you submit must be your own and cannot contain anyone else's work or ideas, without proper attribution. 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. This ensures that your solution is truly your own, that you understand the course material, and that your grade reflects your own understanding.

Note that it is a serious offense to help someone commit plagiarism. *Do not let others look at your solutions, even in draft form.* If you are unsure whether an activity may constitute plagiarism or undue collaboration, consult the instructor immediately. If you are having trouble with the course, come speak to us, that's why we're here!

Important Dates

Deadline to add Y courses:	May 22, 2006
Deadline to drop Y courses:	July 23, 2006
Classes end:	August 11, 2006
Final exams:	August 14–18, 2006