

This sheet summarizes information for the course CSC 363H 5S (“Computational Computability and Complexity”) during the Spring session of 2008 at the University of Toronto at Mississauga. By the end of the first week of classes, you should read and become familiar with the contents of this information sheet and the relevant sections of the course website.

**Course
Website**

<http://www.cs.utoronto.ca/~avner/teaching/CSC363/>

The course website will always contain the most up-to-date information possible. *You are responsible for all announcements posted on the course web site as well as all announcements made in lectures and tutorials.*

**Instructor
Information**

Instructor	Office	Phone	Email	Office Hours
Avner Magen	SB 4062	SB 4062, 905-569-4741	avner at cs.utoronto.ca	Mon 14-15

Lectures

Section	Time	Room	Instructor
L0101	Mon 11-13	NE 139	Avner Magen

Tutorials

Time	Room	TA's name
F 3	NE 228	Siavosh Benabbas

Tutorials begin during the *first* week of classes (on January 12).

**Required
Textbook**

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 website for additional references.

Outline

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; other complexity classes; lower bounds on problem complexity.

Grading
Scheme

Item	Deadline	Weight
Exercise 1	Jan 18	3%
Exercise 2	Feb 15	3%
Exercise 3	Feb 29	3%
Exercise 4	Mar 14	3%
Exercise 5	Apr 4	3%
Assignment 1	Feb 1	9%
Assignment 2	Mar 7	9%
Assignment 3	Apr 11	9%

Item	Date	Weight
Term Test 1	Feb 8	12%
Term Test 2	Mar 28	12%
Final exam	TBA (in the period 16–28/4)	34%

- The term test will be held during regularly scheduled tutorial, will be closed-book.
- To pass this course, you must achieve a mark of 40% on the final exam.

“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.

Assignment
Submission

Assignments should be submitted at Tutorial. Exercises are to be completed individually, to help you cement your own understanding of the course material. Assignments are to be completed in groups of no more than three individuals. No late exercises or assignment will be accepted except for documented unusual circumstances (the TA will typically go over solutions in tutorial).

Special
Consideration

If you are unable to submit one of your assignments on time because of unusual circumstances outside of your control, please follow the **Policy on Special Consideration** given on the main course webpage. In particular, hand in your assignment **directly to your instructor** or to one of the staff in the main office (SF 3302), along with a completed “Request for Special Consideration” form (including your supporting documentation).

Similarly, if you are unable to write one of the term tests because of unusual circumstances outside of your control, please submit a “Request for Special Consideration” form (including your supporting documentation) as soon as possible.

Plagiarism

Please read the **Guidelines for Avoiding Plagiarism** page for full details of the course policies and the Faculty’s rules. Plagiarism is a form of academic offence and it is treated very seriously. **The work you hand in (assignments and tests) must not contain anyone else’s work or ideas without proper attribution.** In particular, the actual writeup of your assignments must be done in isolation from others and without copying from notes or other sources. This ensures that your solution is truly your own, and that your grade reflects your own understanding of the course material. Note that it is also a serious offence to help someone commit plagiarism. *Do not let others look at your solutions, even in draft form.*

Please do not commit plagiarism, for your own sake. If you are having trouble with the course, please come speak to us, that’s why we’re here!