CSC 463: Computational Complexity and Computability
Winter 2019

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Please use email for personal matters only. Include “CSC 463” in the subject or your email. For other matters, see the instructor or TAs during office hours.

Textbook  Michael Sipser “Introduction to the Theory of Computation” (2nd or 3rd Edition)
Course description  Computability Theory (5 weeks): Turing machines, Church’s Thesis, decidability and semi-decidability, diagonal arguments, the Halting Problem and other undecidable problems, reductions, complete problems. Computational Complexity (7 weeks): The classes P and NP, polynomial time reducibility, NP-completeness, Cook-Levin Theorem, various NP-complete problems, time and space complexity, intractable problems, other topics.

Lectures  Monday and Wednesday 2-3 in Bahen 1200
Tutorial  Friday 2-3 in Bahen 1200
Instructor office hours  Monday 3-4 in Bahen 6412
TA office hours  (to be determined)

Grading  10% for each of four problem sets
20% midterm exam (in tutorial on March 1)
40% final exam

If you must miss an exam due to medical reasons, you must inform the instructor by email in advance (or as soon as possible) and present a doctor’s note in accordance with UofT policy.

Homework policy  Assignments are due at the beginning of tutorial/lecture, since solutions will be discussed during the tutorial/lecture. The work you submit must be your own. You may discuss problems with each other; however, you should prepare written solutions alone. Copying assignments is a serious academic offense and will be dealt with accordingly.