

CSC373F Algorithm Design and Analysis Instructor: A. Borodin
Text: “Algorithm Design ” by Jon Kleinberg and Eva Tardos

CSC373 is our 3rd year undergraduate course in algorithm design and analysis. This is a standard and required course in most CS programs throughout the world. Following the text, we will be emphasizing various algorithmic paradigms such as greedy algorithms, divide and conquer, dynamic programming, network flows, linear programming and IP/LP rounding, randomized algorithms, local search. These techniques will be applied to a wide variety of (well motivated) discrete computational problems with a focus on combinatorial optimization. This year we are also including material relating to complexity theory (e.g. NP completeness) since CSC 363 is no longer a required course (and is now replaced by CSC 463). Many Algorithm courses and texts include some complexity theory as it is natural to have some understanding of fundamental limitations when designing algorithms.

The grading scheme will be based on 3 problem sets (5% each), each of which will be immediately followed by a term test (15% each), and a final exam (40%). As soon as an assignment is due (on a Wednesday) and collected, we will discuss the solutions in class and a term test will follow (on Friday). Therefore, no late assignments will be accepted.

See the course web page (www.cs.toronto.edu/~bor/373f11) for the dates of all problem sets and tests. The course web page will always contain the latest information and *you are responsible for all announcements on the course web page*. Please check the web site at least twice a week.

Email Policy: I try to read emails regularly but I do NOT promise to reply to all emails. In particular, some questions require a technical answer and I will often answer such questions in class so that everyone can benefit. I welcome questions and comments at all times and especially in class. If you are confused, there is a good chance others are confused also.

Office hours (SF 2303B): To be announced. Beyond any posted office hours, students are always welcome to make appointments and/or drop by to see if I am available. In general, I prefer speaking to people in person than via email!