

COMP 531 Theory of Computation — Spring 2010
McGill University

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Lectures: Monday and Wednesday 8:30 – 10:00 in ENGTR 2100.

Office Hours: Monday and Wednesday 3–4pm in McConnell 309. Questions via emails are welcome.

TA: Anil Ada.

Course website: <http://www.cs.mcgill.ca/~pnguyen/531S10/>

Textbook: Sanjeev Arora and Boaz Barak “Computation Complexity, A Modern Approach”. A draft of the book is available on the web.

Reference: Ding-Zhu Du and Ker-I Ko: “Theory of Computational Complexity”.

Prerequisite: COMP 330.

Course Contents This is an introductory course to computational complexity theory. Although COMP 330 is a prerequisite, basic definitions will be given. For most of the course we will discuss several different models of computations under restrictions on resources (such as time and space). These will take us to a number of complexity classes and their relationships, the notions of reduction and completeness.

We follow the text book closely and will cover Chapters 1–7 and possibly topics from Chapters 8, 11, 13, 14, 15 and others.

Marking Scheme: 4 to 5 assignments.

NOTES: In accord with McGill Universitys Charter of Students Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/integrity for more information).