G22.1170 Fundamental Algorithms, Fall 2013

Time	TBA
Place	TBA
Instructor	Prof. Joel Spencer, wwh 829
Phone	x8-3219
email	spencer@cs.nyu.edu
Office Hours	TBA
Text	Introduction to Algorithms by
	Cormen, Leiserson, Rivest, Stein – THIRD EDITION
Midterm Exam	TBA
Final Exam	TBA

There will generally be one assignment per week, made available electronically (on the website) around classtime and due the next week. Submission of assignments (unless clearly marked otherwise) is *mandatory*.

Collaboration on the assignments is *encouraged.* Each student must hand in the assignment individually and should write out the solutions in their own words. At the end of the assignment the collaborations must be listed. E.g.: Collaboration with Alan Turing and William Gates.

The final grade will be based 60% on the Final Exam, 30% on the Midterm and 10% on the Homework. But grades are not determined by an algorithm, subjective factors such as class participation (in both lecture and recitation) are a "fudge factor" that can carry great weight.

The Final Exam date is FIXED by the University well in advance. You MUST NOT arrange your flight home for an earlier date! The midterm date is to be announced.

On the next page is a *rough* outline of the course. We expect to cover these topics but not necessarily in the precise order indicated. In addition there is likely to be some material in class that is not in the text. Students are responsible for all such material.

Weekly Schedule

Note that this schedule may be adjusted during the term. Any such adjustments will be noted on the website.

WEEK	TOPIC	CHAPTER
1	Heaps	6
2	Sorts	7,8
3	Θ, Ω, o and O	3
4	Divide and (sometimes!) Conquer	4
5	Hashing	11
6	MIDTERM	(tentative!!)
7	Binary Search	12
8	Dynamic Programming	15
9	Greed is Good	16
10	Graph Search	22
11	Min Spanning Trees	23
12	Number Theory	31
13	P & NP	34
14	Shortest Paths	24.2,3