CSc 220: Algorithms

Instructor: Rosario Gennaro
Office Hours: Tuesdays, 2-4pm in Shepard 279
Course Webpage: http://www-cs.ccny.cuny.edu/ rosario/csc220/


Grading: The grade will be computed as follows: 30% on the final exam, 30% on the midterm exam, and 30% on the homework. The remaining 10% will be at the instructor’s discretion based on class participation.

Homework: Homework will be assigned (almost) weekly, tentatively on the schedule listed below. The computation of the homework component of the grade will not take into account the worst scored homework (in other words you are allowed to ”bomb” or not return one homework without consequences). Each problem in the homework should be done on a separate sheet of paper, marked with your name and the course number. Collaboration is allowed and actually encouraged, but students must write up solution on their own and return individual solutions. Moreover you are required to acknowledge your collaborators. Similarly you are allowed to research solutions on the Internet or any other sources, but again you must acknowledge them.

Tentative Course Schedule


Thursday September 3: Recurrences, summations, etc.

Tuesday September 8: Sorting: Heaps and Priority Queues. Homework 1 due. Homework 2 out.

Thursday September 10: NO CLASS

Tuesday September 15: NO CLASS


Tuesday September 22: NO CLASS


Friday September 25: (Classes on a Tuesday Schedule) Median and other statistics.


Thursday October 1: Data Structures. Search on Trees. Homework 4 due. Homework 5 out.

Tuesday October 6: Data Structures. Balanced Trees.

Thursday October 8: Augmented Data Structures. Homework 5 due. Homework 6 out.

Tuesday October 13: Dynamic Programming.


Tuesday October 20: Midterm
Thursday October 22: Amortized Analysis. Homework 7 out.

Tuesday October 27: Graph Algorithms: breadth-first and depth-first search. Topological sort.

Thursday October 29: Graph Algorithms: shortest path. Homework 7 due. Homework 8 out.

Tuesday November 3: Graph Algorithms: all pairs shortest path.


Tuesday November 10: Network Flow.


Tuesday November 24: Number Theoretic Algorithms: GCD. Modular Arithmetic.

Thursday November 26: NO CLASS.


Tuesday December 8: Cryptography. Homework 12 due.

Thursday December 10: A word on NP-completeness and approximation algorithms.