

CS:50:198:213 Data Structures Spring 2009

Course Specifics:

Instructor: Rajiv Gandhi
Office: 311 Business and Science Building
E-mail: rajivg@camden.rutgers.edu
Class Time: TTh 4:30-5:50pm
Classroom: BSB 336
Office Hours: Mon, Wed 12:15-1:15pm
Class web-page: <http://crab.rutgers.edu/~rajivg/courses/s09/cs213>

If you have any questions or comments please do not hesitate to see me during my office hours or send me e-mail. If you cannot see me during my office hours please send me email and we can arrange to meet at some other time.

Text Book:

The required text for this course is the following.
Introduction to Algorithms, 2nd edition, Cormen, Leiserson, Rivest, Stein, McGraw Hill.

We will also use *Algorithm Design* by Kleinberg and Tardos, Addison-Wesley.

Course Objectives:

This course builds on CS 113 (Object Oriented Programming) and CS 171 (Mathematical Foundations of Computer Science) and is concerned with data structure design and implementation, applications of data structures, and algorithm design. Tentative topics covered (not necessarily in order) are: Divide and Conquer, Graphs, Graph Traversals, Priority Queues, Shortest Paths, Minimum Spanning Trees, Disjoint Sets, Union-Find, Hashing, Binary Trees, Balanced Binary Trees, Splay Trees.

Performance Evaluation:

Your final grade in the course will be decided by your performance in homeworks and exams. Their weightage is as follows.

1. Homeworks – 35%.

2. Projects – 35%.
3. Exams – 30%.

Please note that the above weightage is subject to change.

The best way to learn the material in this course is by solving lots of problems on your own. There will be an assignment every week except during the weeks when the exams are scheduled. The assignments are due in the following class period. Late homeworks will not be accepted. Solutions to homeworks will be distributed at the end of the class period on the due date.

Advice:

Come to every class! Missing even one class can have a substantial effect on your ability to understand the material. Be prepared to think and concentrate, in the class and outside. I will try to make the class very interactive. Participate in the class discussions. Ask questions when you don't understand something. Keep up with the class readings. Start homeworks early and come and see me to discuss ideas, solutions or to simply to check if what you understand is correct.

Collaboration Policy:

We encourage discussion between students regarding the course material. However, no discussion of any sort is allowed with anyone on the homeworks for the class. If you find solution to some problems in a book or on the internet you may use their idea for the solution provided you acknowledge the source (name and page in the book or the website, if the idea is found on the internet). Even though you are allowed to use ideas from another source you must write the solution in your own words. Any violation of this spirit will be dealt with harshly. If you are unsure whether or not certain kinds of collaboration is possible please ask the instructor.