

COMP 7712 – Algorithms/Problem Solving – Fall 2019

Instructor: Nirman Kumar

Contact Information:

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Office hours: Dunn Hall 307, Friday: 10:00-11:00 am or by appointment (send email)

Lectures: T Th : 11:20 am - 12:45 pm, Dunn Hall 119

TA : Tianxing Ma (tianxing.ma@memphis.edu) and Anik Khan (akhan9@memphis.edu)

Prerequisites: A basic course on algorithms and complexity. Basic graph theory, combinatorics, probability and linear algebra. Mathematical maturity.

Coverage: Fundamental algorithm design techniques such as recursion, greedy algorithms and dynamic programming. Basics of graph algorithms, network flows, optimization algorithms. NP-completeness.

Textbooks: Algorithms by Dasgupta, Papadimitriou and Vazirani - Book is freely downloadable. Jeff Erickson's superb new book - <http://algorithms.wtf> will also be referred to.

Grading: The grading will be done as follows. The scheme is subject to change at instructor's discretion.

- 5 homeworks each carrying a weight of 6% for a total of 30%. Students are encouraged to discuss the problems, but every student must submit their own solution and while writing one should work alone.
- 3 programming assignments each carrying a weight of 5%, for a total of 15%.
- 1 mid-term exam - 10%.
- A final exam of weight 30%.
- Class participation and problem solving - 15%.

Plagiarism/Cheating policy: All assignments for this class are to be written individually.

You may refer to a book, or the Internet or some other source but in that case, please acknowledge all such sources in your submission. You may work with other students in the course, and I encourage you to do so, but as stated above, every student must write and submit their own assignment. **There should be no direct copying from the assignment of your co-workers, and you are required to name your co-workers.**

If I determine that you copied something directly from an external source (book, Internet, or some other source), you will receive a failing grade on the assignment and (at my discretion) a failing grade in the course. If I determine that you have copied another student's assignment, this will happen to both you and the person from whom you copied. The incident may also be forwarded to the University Judicial Affairs Office for further disciplinary action.