

CIS 502: Analysis of Algorithms (Summer 2019)

Instructor Information: Sanjeev Khanna (sanjeev@cis.upenn.edu). Office hours are on Tuesdays (1:30 pm – 2:30 pm) and Thursdays (1:30 pm – 2:30 pm) in Rm 457C, 3401 Walnut.

Course Website: There is a Canvas course website. Please email me if you have any problems accessing it.

Textbook: *Introduction to Algorithms* by Cormen, Leiserson, Rivest, and Stein, THIRD EDITION, 2009.

Students are expected to know the first 14 chapters of this book. But I will still do a quick review of some of the material from these chapters. The homeworks and the final exam will assume knowledge of this material and will include questions on this material.

Topics: Review material (ch. 1 – 14); Algorithm design and analysis paradigms (ch. 15 – 17); Graph algorithms (ch. 22 – 26); NP-completeness (ch. 34); Approximation algorithms (ch. 35); Randomized algorithms.

Grading: Grades for the course will be based on the homeworks and a final exam. There will be four homework assignments worth 32% of the grade, and a final exam worth 68% of the grade.

Policies:

- You are allowed to work on the homeworks in groups of up to 2 students. **But you must write your solutions independently!** Please specify the name of your homework partner when submitting the homework.
- You may consult class notes and the text for solving homework problems but **no other resources are allowed.**
- **You must typeset your homework.** We will provide you with Latex template for writing homework solutions. Please staple your homework.
- Please do not ask for any extensions; the course is on a very tight schedule.
- **Homework solutions will not be posted online.** You must remember to pick up solutions in the class.
- **No electronic devices (cellphones, laptops, tablets) during the class.** The only exception to this is if you are using a laptop or tablet for note-taking – please make sure that your usage is strictly limited to note-taking.

Final Exam:

August 8 (Thu): 9:30 AM to 11:30 AM. The final exam will be *closed book and closed notes*.