

Winter 2018

Prof. Rafail Ostrovsky

Introduction to Algorithms and Complexity

First lecture: Monday, January 8th, 12noon-1:50PM

CS180

When/where: WINTER 2018, M,W 12noon-1:50pm Bunche Hall Room 2209A;

Prof: Rafail Ostrovsky;

Office: Egnineering 6, Phase 2, Office 475 (4th floor)

Office hours: Each Wednesday 2-3pm or by appointment.

TA's:

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Description: Introduction to design and analysis of algorithms. Design techniques: reduction, divide-and-conquer, greedy method, dynamic programming, network flow; choice of data structures and representations. We will cover complexity measures including time and space, upper and lower bounds, asymptotic complexity; NP-completeness, use of randomness. If time permits, I will present advanced topics, such as PSPACE and other complexity classes.

Prerequisites: CS32, CS61.

Textbook: *Algorithm Design* by Jon Kleinberg and Eva Tardos, published by Addison-Wesley.

Grading Policy: Homework: 15%. HW will be assigned most weeks on Wednesday, due the following Friday. You must solve the problems yourself without looking up answers on the internet or collaborating with other students. **Midterm:** 40%. The midterm will be held on **February 21st, 2018** during normal lecture hours. **Final:** 45%. The final will be held during final exam week. All exams will be closed book and no electronics.

Policies: Attend classes and participate – though not required it will help you learn the material. The more questions you ask, the more you learn. I always welcome questions during class or office hours. (Due to large class size, do not email me or TAs your questions regarding material, just see me or TA's in person.) Academic honesty will be actively enforced, see: <http://www.deanofstudents.ucla.edu/Student-Conduct>. Direct all re-grade requests to TA's within one week of announced grade (please do not ask me for re-grade – address all grading questions to TAs).