
Course Information

Course Staff	Room	Phone	Email	Office Hours
Prof. Sofya Raskhodnikova	IST 343F	x3-0608	sofya@cse.psu.edu	Wed. 3:20-5:20pm
Prof. Adam Smith	IST 338K	x3-0076	asmith@cse.psu.edu	Mon. 3:20-5:20pm
TA Shuyi Zheng	IST 343D	x3-7324	shzheng@cse.psu.edu	Thu. 3-5pm

Webpage <http://www.cse.psu.edu/~asmith/cg465>

Prerequisites CSE 120 (basic data structures, recursion), CSE 260 (mathematical induction, big-oh notation, graphs, trees, equivalence relations, basic probability) or equivalent.

Lectures: Section 001: MWF 12:20–01:10pm (Room 118 Thomas).
Section 002: MWF 1:25–02:15pm (Room 104 Rackley).

Textbook: Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, and Clifford Stein. *Introduction to Algorithms*. 2nd ed. Cambridge, MA: MIT Press. ISBN: 0262032937. Electronic versions of the book are available from Google Book Search (limited viewing but searchable).

Syllabus: Classical algorithms and data structures; techniques for the design and analysis of efficient algorithms. Topics include sorting; search-related data structures such as trees, heaps, and hash tables; graph algorithms; divide-and-conquer algorithms and recurrences; dynamic programming; greedy algorithms; amortized analysis; NP-completeness and approximation algorithms.

Homework There will be an assignment due every Friday before the lecture. The assignments will be posted one week in advance, and will depend only on the material covered up to the distribution date. A couple of assignments will contain programming projects that you can implement in C++ or Java.

Late homework will generally not be accepted. If there are extenuating circumstances, you should make arrangements at least 48 hours in advance with the TA. Only serious excuses will be considered in cases where prior arrangements were not made.

You should be as clear and concise as possible in your write-up of solutions. Understandability of your answer is as desirable as correctness, because communication of technical material is an important skill. A simple, direct analysis is worth more points than a convoluted one, both because it is simpler and less prone to error and because it is easier to read and understand. Points might be subtracted for illegible handwriting and for solutions that are too long.

Collaboration and Honesty Policy Collaboration on homework problems, with the exception of programming assignments, is permitted, but not encouraged. If you choose to collaborate on some problems, you are allowed to discuss each problem with at most 3 other students currently enrolled in the class. Before working with others on a problem, you should think

about it yourself for at least 45 minutes. Finding answers to problems on the Web or from other outside sources (these include anyone not enrolled in the class) is strictly forbidden.

You must write up each problem solution by yourself without assistance, even if you collaborate with others to solve the problem. You must also identify your collaborators. If you did not work with anyone, you should write "Collaborators: none." It is a violation of this policy to submit a problem solution that you cannot orally explain to an instructor or TA.

No collaboration whatsoever is permitted on exams. The collaboration policy for programming problems will be specified in the assignments.

Violations of this policy will be dealt with according to University regulations.

Exams and Grading The grade will be calculated as follows:

Homework	weekly	50%
Midterm 1	tentatively Thu, Feb. 15	15%
Midterm 2	tentatively Tue, Apr. 3	15%
Final exam		20%