

Johan Håstad, Nada
August 30, 2011

Complexity theory

Rules for homework, Fall 2011, updated August 30

As always, the Nada Code of Honor (available electronically separately from the course home page) applies to this course. Make sure you read it carefully. This document only details the rules specific to this course.

Homework sets

We will have weekly homework sets. Each is handed out at the last lecture of a week and is due at the beginning of the last lecture the following week.

For each set you should hand in a written solution. You might be asked to discuss the solution with the instructor but in most cases not.

There is a possibility to give an oral presentation on some research paper. The topic of the presentation is chosen by the student and any paper on the topic of the course from a recent conference is acceptable. Most such conferences run yearly and examples of suitable conferences are STOC, FOCS, Computational Complexity, Approx and Random. Conferences where some papers (depending on topic) are good include Crypto, ESA, Eurocrypt, ICALP, FCT, SODA, STACS and SWAT. There might be other possibilities of material to present. Please inform (by email if possible) Johan Håstad of your choice for the presentation by **October 7**.

Degree of collaboration

You should write down your own solutions *in your own words* to each homework. You are, however, allowed to discuss the problems in study groups of up to two students, but still each group member writes down and hands in his or her own solution (not one solution per group and not several copies of the same solution). On your written solution you should clearly state the members of your study group. You cannot be a member of several study groups on the same homework set.

Deadlines and late solutions

Problem sets have a deadline which is a certain time on a certain day. For each homework set you may hand in some problems on time and some problems late. However, for each problem set, only one set of late solutions is accepted. After your oral presentation you may not hand in late solutions. *Late solutions must be put in Johan Håstad's mailbox at the department, level 4, Lindstedsvägen 3.*

Late solutions are graded as follows. Your score is multiplied by 0.9^d , where d is the number of *working* days that the solution is late. Solutions handed in late but on the correct day will be considered as being one day late. That is, if the deadline is on a Friday at 10:15 and one student hands in a solution on Friday at 16:00 and another student hands in a solution the following Monday before 10:15, both these solutions are one day late. A solution handed in on Monday afternoon is defined to be two days late. If you hand in some solutions on time and some late, only those that were handed in late are subject to the 0.9^d multiplier. Remember that you may only hand in one set of late solutions.

The final grade of the course

As we have just changed the format of the course, this is preliminary version of the rules for grading. If the first few homeworks prove these rules to be not appropriate, we might make changes.

The final course is calculated partly through an intermediate numerical value. If H_i is the score on homework problems set number i and O is the grade given at the oral presentation then the total on the course is

$$\sum_{i=1}^7 H_i + O.$$

Each homework set will have maximum of at least 30 points with an average of 40 and the value of O will be a multiple of 10 in the interval $[30, 80]$.

The threshold for grades E,D,C,B,A are 100, 130, 160, 185 and 210, respectively.

On top of this sum requirement, a grade of E or better requires at least 10 points or better on at least 5 homeworks. A grade of C or better requires the same on at least 6 homeworks.

Let us note that giving a lecture does make it significantly easier to get a high grade on the course.