Johan Håstad, Nada
August 29, 2011

Complexity theory
Tentative Rules for homework, Fall 2011

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

The plan is to have three sets of homework problems with deadlines on September 20, October 4 and October 21, respectively. The statement of the problem sets will be available at least two weeks prior to these dates.

For each set you should hand in a written solution which you present orally to one of the instructors. You will be able to reserve a time for the oral presentation via the course web page. Your solutions will be graded by the person with whom you have booked a time, *so, until you have reserved a time, your solution will not be graded at all*.

There might also be 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 three 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 on on Monday afternoon is defined to be two days late. If you hand in some solutions on time and some late, only those that where 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

The final course is calculated 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

$$H_1 + H_2 + H_3 + O.$$

Each homework set will have maximum of at least 100 points 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 130, 165, 200, 230 and 260, respectively.