CSE 421: Introduction to Algorithms
Winter 2002
Grading Guidelines

We're sure you're aware of all of the following, and some of it is repetitious, but just to be sure we're all on the same page with respect to what homework solutions should look like:

Always prove that your algorithm works. Whether the problem specifically asks for it or not, you should always prove that your algorithm works. This will generally consist of two parts.

- Prove that your algorithm halts.
- Prove that it outputs the correct answer.

You may lose points for style. Your proofs and explanations should be clear, well-organized, and as concise as possible. It is better to err on the side of including too many details, however, you should not belabor things that are completely obvious. Unfortunately, a lot of this is subjective. Often, students think of proofs as either "right" or "wrong." In reality, writing a proof is more like writing an essay. Along these lines, if you are not able to find a complete answer to a problem, you are better off explaining clearly what you've done rather than faking a proof.

Pictures and *short* pieces of pseudocode can be helpful, but are not sufficient. Make sure to label everything. Define all the variables you use. Make sure you've explained everything clearly in English.

Try rewriting your proofs. Writing out your answer fully on a piece of scratch paper before writing up the version to hand in really does make a difference. You are more likely to catch mistakes or exceptions, and your proof will be better organized.

Set up good notation. Many of the exercises in the book are phrased almost entirely in English. It will be your job to rephrase them mathematically when necessary. The first few lines of many of your proofs will look something like, "Let S be the set of students taking cse421." Make sure that you've clearly defined any variable you use. Choosing good names for your variables is also important. For this class, it probably won't matter too much, but for complicated proofs, it can make a big difference.

Collaboration You are allowed to collaborate on the homework to the extent of formulating ideas as a group. However, *you must write up the solutions to each problem set completely on your own.* You must also list the names of everyone that you discussed the problem set with.