

## CSE 373 – Analysis of Algorithms Spring 2017

### Academic Honesty Review

The point of this assignment is to examine issues of academic integrity and academic dishonesty.

You should hand in your problem set *online* using blackboard. *No late problem sets accepted.*

Latex is a wonderful and powerful scientific word processor. The first homework must be done in Latex.

For the Macintosh, install Mactex and use Texshop. For linux, install texlive-full. Then you can use linux programs such as texworks, texmaker, or gummi. For Windows, install Miktex and use WinEdt, texmaker, or some other editor. You can also use online latex programs such as Overleaf or Sharelatex.

For drawing figures, I recommend using xfig, Ipe, inkscape, the Mac tool Omnigraffle. You can also use more general presentation tools such as Powerpoint, Keynote, or Libreoffice.

This writeup includes input from Joe Mitchell, Don Porter, and Steve Skiena. I welcome further suggestions from other students and professors.

## Academic Honesty

These are bullet points from the course procedures document:

- I take academic honesty *very* seriously. Infractions have serious consequences—generally an F in the course (or worse).
- It is *your* responsibility to ensure that you understand what constitutes academic dishonesty.
- Representing another person's work as your own is always wrong. It is wrong in this course. It is wrong in your profession.<sup>1</sup> It is wrong in life. It is wrong. Period.
- Always cite! If you work with multiple people, cite with whom you worked.
- Copying (or approximately copying) a solution from the web or someone else's solution and putting in your problem set is plagiarism *even if you cite your source*.
- Sharing any part of your write-up (latex, PDF, postscript, figures, or hard copy) is academic dishonesty and invites plagiarism. Your own write-up is private information and should not be shared.
- You may be able to find solutions to some of the homework problems on the web or from more senior students. It is academic dishonesty to search for and use such solutions in preparing your own write-up for the assignment, and it is plagiarism to copy such solutions and to submit as your own (even if you cite).

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<sup>1</sup>Plagiarizing can end your career, regardless of your skill level, your educational credentials, or how hard you have worked up until this point.

- You can work together to solve problems, but you must write up your own solutions, writing only those ideas and answers that you personally fully understand, and stating in your write-up with whom you worked to obtain the solution.
- If you are in doubt about whether or not you are permitted to use particular source materials, you should obtain written permission from the professor, in advance of your submission. Such permission is best requested and obtained by email.
- *It is academically dishonest to hand in a solution that you don't understand.*

### Problem 1

Explain why we let students work together to solve problems, as long as the students cite their collaborators. Explain why working together is not academically dishonest in this course.

Working together and discussing ideas is a crucial part of learning any difficult topic. Without talking to any peers, you have nobody to bounce ideas off of. Sometimes an idea requires multiple minds and can't be done by yourself. Therefore, discussing algorithm questions is not academic dishonest. As long as you are not copying or writing down ideas that you do not understand, it should be fine.

### Problem 2

Explain why it is important to your professional development to struggle with a problem that you cannot solve quickly. In other words, the instructor deliberately assigns homework he knows you will likely have to think about for days or weeks to solve. What do you expect to learn from this experience?

If you do not struggle with the problems, or anything that is difficult, you do not learn in the process. You cannot always rely on someone to be there to help you through a tough situation and you will need to spend all energy in solving the problem yourself. Furthermore, an instructor might assign homework that takes so long to solve because those topics might be relevant to either an exam or even in industry.

### Problem 3

Explain why, although it is ok to work with other students, it is plagiarism to share and/or copy other write-ups. Give an example of collaboration that is academically honest. Give another example of collaboration that is academically dishonest.

It is plagiarism to share/copy write-ups because you are not articulating your own response. Copying does not require any thinking or deep understanding and will not help you. One example of honesty of this is if two students worked on a homework equally and both commence to write their own solutions. An example of dishonesty might be if two friends split the homework up and then exchange their halves at the end.

#### Problem 4

Explain why it is academically dishonest to share your solution set with another student. Explain how you could get burned from just sharing your writeup even if you do not copy yourself.

If you share your solutions with someone, you are not benefitting them in any way. It is much better to let someone think about the answer and create their own responses than to risk academic dishonesty. Even if you do not copy homework, but let's say you give it to a friend, you are still eligible for academic dishonesty. As a result, you and your friend will be penalized, despite only one person copying.

#### Problem 5

Explain why copying (or approximately copying) solutions from the web (or another source) is plagiarism, even if you cite your source.<sup>2</sup>

By copying from an online source, you are not thinking for yourself. In most cases, when someone sees an online solution, they become too lazy to understand the answer fully and assumes they know it. They are not thinking at the level that is required for this course and will create bad habits in the long run.

#### Problem 6

Explain why it is better for your grade to leave a question blank, rather than search for answers on the web. (Hint: calculate approximately how much a homework problem is worth to your raw score versus an exam question. Feel free to include the risk-benefit analysis of getting caught.)

By leaving a question blank on a homework, you are not losing much points. However, if you copy the answer and do not understand what you wrote, it will be detrimental when the exam comes along. You will not be able to answer the exam questions to your full capacity and will risk losing more points in the long run.

MAB: I'm commenting out this problem, because I'd rather students not use the internet to help them solve problems at all.

#### Problem 7

Suppose that you are completely stuck about how to approach a problem. Give an example of using the internet to help that is academically honest. Give an example of using the internet that is academically dishonest.

One example of internet honesty is looking up additional resources that help further explain and deepen your understanding of a topic. This will in turn help you answer the question yourself.

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<sup>2</sup>In this course I ask that you *not* to scour the web for solutions to the homework problems. If there are class topics that you don't understand from reading the course materials come talk to me. But even I did let you search the web to find solutions, this would *still* be plagiarism. Why?

The example of internet dishonesty is looking up the exact algorithm to a question and copying it verbatim.

#### Problem 8

Imagine that you are employed at a major software company, say Google, Facebook, or Microsoft, and commit code into a product that you copied from a website. Explain the potential risks to both you and the company if this action is discovered by the owners of the code.

Plagiarizing while you are in industry is a major risk. If you are caught, you risk not only losing your job but also putting the company at risk for litigation. Furthermore, the company might have cause to sue you if they feel it is just in their case.

#### Problem 9

Please speculate on why we decided to make a problem set on academic honesty.

Academic dishonesty is a huge problem. I've seen professors constantly tell students not to plagiarize, but somehow people don't listen and they still do it. Eliminating plagiarism is a tough task but with more education, perhaps it can be reduced greatly.

#### Problem 10

How much time did this writeup take you, including the time it took to learn latex.

I already knew LaTeX so doing this assignment took about 20 to 30 minutes.