SPRING 2019: **COT 5407** Intro. to Algorithms
[Collaboration Policies, Academic Misconduct, and Homework Guidelines]

Academic Misconduct Policy (January 7, 2019): General policies for academic misconduct are governed by FIU values and rules. This is explained more at: https://fiu.instructure.com/courses/29709/pages/academic-misconduct-statement Reiterating two of the definitions from the above link: **Cheating** is the *unauthorized use of books, notes, aids, electronic sources; or assistance from another person with respect to examinations, course assignments, field service reports, class recitations; or the unauthorized possession of examination papers or course materials, whether originally authorized or not*; **Plagiarism** is the *use and appropriation of anothers work without any indication of the source and the representation of such work as the students own. Any student who fails to give credit for ideas, expressions or materials taken from another source, including internet sources, is responsible for plagiarism.* More details can be found at http://integrity.fiu.edu/ Note that neither "cheating" nor "plagiarism" will be tolerated in this class. Read below to understand how it applies to COT 5407 this semester.

Collaboration Policy (January 7, 2019): The main goal of this class is to learn a bag of tricks for solving computational or algorithmic problems. The more problems you solve, the better you get at solving a new problem. Solving an algorithmic problem is a creative process. When presented with a new problem, it is your task to "take it apart" and reach your own understanding. This is a painstaking and time-consuming process. There is much to be learned from the process of thinking out solutions to the assigned homework problems. When you solve many problems, you start to build the intuition needed to quickly figure out the right approach for a new problem. You also start to build the intuition needed to know when an approach has reached a dead end and a different approach is needed.

Getting help from elsewhere destroys this process. However, discussing with others after you have spent some time with a problem can help the process and bring other aspects of the problem to light. You may discuss homework problems with me or with other students in your class, after you have given it sufficient thought. But when the time comes to write up your solution, it MUST be your own work, and it MUST be in your own words.

If after working on a problem yourself, you have been unable to solve it satisfactorily, then you may get help from other people, textbooks, or the internet. If you received help from any source, it is necessary to *cite* your source at the appropriate location in the homework, i.e., write down the URL or the name of the person or the author and title of the text from which your solution was acquired. GIVE EVEN THE DEVIL IT'S DUE! After getting help from some source, make an attempt to write down the solution in your own words. If you discussed with a classmate or friend and came up with a solution together, then both of you should indicate this in your homeworks. If you are helping someone or providing your solution to someone, make sure they mention you as the source of the solution. You, too, may indicate that you helped this person with the specified problem. If you follow the above rules, you can earn full credit for correct solutions. If you do not write down where you got

help from, it would be considered as cheating. Any evidence of cheating (without citing the source) will result in severe penalties of all parties involved.

If this policy gets refined over the course of this semester, changes will be posted on the course webpage.

Finally, let me also warn you that many solutions you may find by doing a web search are simply wrong. You have to use web search wisely and be aware that there is no policing or quality control on the internet.

General submission guidelines: Problems are labeled as (**Exercise**), (**Regular**), (**Kattis**), or (**Extra Credit**). (**Exercise**) are to be turned in, but will not be graded. (**Regular**) problems are to be turned in and will be graded. (**Kattis**) problems require a Kattis submission, as described below. They need not be turned in. (**Extra Credit**) problems also need not be turned in. Both (**Kattis**) and (**Extra Credit**) problems will be graded, but credit will be given only if it is completely correct. Extra credit scores will be used **only** if your grade is on the borderline between two grades.

Since people tend to scribble on handwritten homework, you are required to type up your assignment and print it out. I strongly encourage you to use LaTeX to write your homework solutions. It has the best typesetting abilities for mathemtical notation and formulae and is not very hard to learn. It produces publishing quality typesetting, unlike all other formatting tools. It also has good formatting packages for writing algorithms, code, and pseudocode. Microsoft Word is terrible at formatting text with lot of mathematical notation. Information on LaTeX downloads are at `https://www.latex-project.org/get/`. For Mac users, I recommend using Aquamacs (`http://aquamacs.org/`) as an editor because it combines perfectly with LaTeX as well as with most programming languages.

For every algorithmic question, clearly indicate its **Input** and its **Output**. Your pseudocode must contain line numbers (like in the text) and must be properly indented. While pseudocode is generally preferred, you may write formal code using a programming language such as C++ or Java (less desirable). Variable names must be meaningful. If a section of the code is complicated, it must be commented. Look at your text to see how to comment pseudocode.

Pay careful attention to the final written solution. Reread your written solutions and look for typographical and logical errors. A well-written solution shows clarity of thought and is likely to receive better grades. Not all problems will be graded and not all graded problems will have equal score. If more than one correct algorithm can solve a problem, then a more efficient solution will fetch more credit. Draw pictures whenever possible.

Submissions and naming files: All submissions should be in pdf format. Name your files as follows: [hN-LastnameFirstInitial.pdf]. Thus my third homework submission would be called "h3-NarasimhanG.pdf". Send all submissions to the email address: `cot5407-s19@cs.fiu.edu`.

Kattis submission guidelines: Problems marked (**Kattis**) require a Kattis submission. You can do a screen capture to show proof that you have correctly submitted a solution to the

corresponding problem on kattis. Furthermore, to get complete credit, you need to write an explanation along with pseudocode explaining your submission. As mentioned above, credit will be given only if the solution was correctly accepted by kattis and if the pseudocode and explanation are correct and satisfacttory.