Department of Mathematics and Statistics

Guidelines for Collaboration on Homework

While using someone else's work or collaborating too closely with a fellow student may benefit your grade initially, it actually hurts you in the long run. Learning to solve problems and write down solutions is an important part of the learning process. One of the best ways to ensure that you understand the concepts and methods being taught is to make sure you can write down a clear and complete solution on your own. Often, actually formulating and expressing the solution is as hard as figuring out how to solve the problem in the first place. Skipping the steps of thinking about and writing up solutions on your own will deprive you of this opportunity to practice and improve your skills and will make future classes and assignments more difficult.

On homework and other out-of-class assignments, the line between acceptable and unacceptable levels of collaboration can be hard to find. Syllabi often contain statements such as, "While you are encouraged to discuss problems with other students, the solutions that you write up and turn in must be your own work." The guidelines below will attempt to clarify exactly what this statement means, what types of collaboration are acceptable, and which are not.

The goals of having you turn in written homework solutions to be graded are first, to give you a chance to express yourself mathematically, and second, to give you feedback on your understanding and progress. If you are not doing your own work, then neither of these goals can be met.

Avoiding Problems with Homework

Here are some suggestions for how you can avoid inappropriate collaboration on take-home assignments:

- When you start working on a problem, you need to spend time thinking individually about what the problem is saying and what it is asking you to do. Thus, you should not start working with other students before you have given some thought to what the problem is asking. Make some preliminary notes or jot down some ideas about the problem. At that point, you are ready to start talking to others about the problem.

- You should never join a group that has made substantially more progress on a problem than you have. Knowing how to get started on a problem takes practice and often takes a good bit of "thinking time." You cannot circumvent this learning process by having someone else "fill you in" or try to "catch you up."

- Once you are discussing the problem with a group, you may jot notes, draw pictures, and sketch arguments, but be careful not to write out details together. Even if you are a full contributor or participant, this does not constitute "your own expression." You should discuss the problem to the point where everyone understands the general approach to the question clearly. Then you should try to work out the details and write it up on your own.

- If you get stuck, try talking to your professor or classmate again. For example, “I think I am supposed to follow example number 2, but I can't get the homework problem to work out.” A classmate may tell you, “Example 2 doesn't apply because they are using a result that only works for prime numbers.” Since you have spent time thinking about the problem, this may be enough to steer you in the right direction. If not, try showing your work to your professor. He or she has a lot of experience giving students hints when they are stuck in the middle of a problem.

- After a discussion with others, it's great to come away with a hint/note to yourself: “Use Integration by Parts” or “Treat odd and even cases separately”, but your notes to yourself should not be more detailed than that. If your “notes” are a solution or an outline of a solution, that crosses the line. If you get carried away in your discussion and do end up solving a problem together with a fellow-student at a board or on scrap paper, then erase the board or recycle the scrap paper and work out the problem afresh when writing it up to submit. This is not only more academically honest, but it will be of much greater help to you in learning the material.

- Remember that you need to be able to explain anything you turn in as your own work. If you can't explain every detail of your solution and the techniques you used to solve the problem, this is a sign that you were working with others too closely.

- Document any acceptable collaboration, including a BIG HINT or partial solution that was obtained from another person.

- Do not look at another student's work if you get stuck on an assignment.

- Do not try to find the same (or a very similar) problem in any other source, including other students, the internet, another text, a solution manual, or the back of the book, even if you think it's just to help you get started.

You really are encouraged to talk to classmates, but for things like discussing assignments in a big picture way to understand what approach might be appropriate, or giving or receiving help on how to solve minor computational or syntax errors. Anything more specific should be done on your own or with the professor.

Based in part on the Academic Honesty Policy Guidelines of the Mathematics and Computer Science Department, St. Joseph's University, Philadelphia, PA