

Jon Cain

Sponsor: Moysey Brio

Course: Math 475A

As an Undergraduate Teaching Assistant for MATH475A, Mathematical Principles of Numerical Analysis, I performed the following tasks for the Fall 2010 semester: I ran one Matlab tutorial at the beginning of the semester, held two weekly, one hour-office hours in the upper division tutoring room, and graded all homework papers. I will now discuss these three items systemically.

About fifteen students attended the Matlab tutorial held the second week of class. I walked the students through the basics of commanding Matlab to do simple and remedial math, then manipulating vectors and matrices, and we ended with a discussion of creating and executing function files. I also gave many online and paper resources to the students via D2L. The tutorial acted as an introduction to Matlab and how to use it to complete homework assignments.

Holding office hours in the upper division tutoring room has been the most fun because I got to help all math students in a variety of subjects and therefore got to learn math by helping them. Often I would initially get stuck on a basic calculus or statistics question and have to either have the student walk me through it or ask one of the other tutors; but this is how I sharpened my own skills in that subject. Furthermore, there is good pedagogical affects of such mediocre meandering on my behalf in that the student got to see a more "mature" math student struggle and work through a problem based on a larger knowledge base (i.e., look at the problem from a different perspective). As far as my own students are concerned, few showed up and when they did, I was able to give them mbiguous answer-hints that helped them solve the problems by themselves.

Grading the homework was tedious. There was only one assignment that I graded completely and typically I would only grade about 75% of it. However, I did improve my skills at grading: For example, the first homework assignment had an average of 10 typed pages and it took me five hours to grade four out of the six problems. The most recent homework assignment also has 10 typed pages on average and it took me about two hours to grade all four problems. I always graded four problems, 25 points each. Two of them, I would grade easily and basically give the students credit for completing the problems. The other two, I graded more thoroughly. The average on the first two assignments was a 50% with sigma = 25. These were good scores, I thought, because Dr. Brio's grading system is on a curve where letters are determined by a certain number of students in that bracket of the letter (e.g., the top 20% will get an A). The other homework, I graded more leniently because the students were getting frustrated; so, I put the average in the 70s with the median in the 80s.

As an Undergraduate Teaching Assistant, I learned many more things than described above. I not only sharpened my skills at the subject and broadened my understanding of it, but I also learned some pedagogy in that I could answer questions in which I knew the answer in a way that I would not give them the answer, but lead them in the right direction. This is a great program that should be continued. Also, the weekly UTA

Seminars were fun and useful when necessary, but mostly fun (at least, I enjoyed the talks). Thank you for reading my reflection.