

Isabelle Boyle

### UTA Reflection Spring 2023

This was my first semester in the UTA program. I worked with Dr. Christian Parkinson as a UTA for the course MATH 413, Linear Algebra. This is a proofs-based class which goes through many of the fundamental concepts of linear algebra. I greatly enjoyed taking this course and was excited at the opportunity to be a UTA for it. I also appreciated the opportunity to have a behind-the-scenes look into how a math class is run, and all the decisions that go into it, especially since I had taken two classes with my mentor prior to being a UTA. My duties consisted primarily of writing out homework solutions, grading, and hosting office hours and review sessions for students, which were all new experiences for me.

This experience helped me academically especially when I was working on grading and writing homework solutions. I realized that I had to be extremely precise in my mathematical language when writing out solutions for students to see, as I couldn't expect them to read between the lines to understand my proofs as an instructor might be able to. I believe this helped my proof-writing and communication skills and gave me valuable practice in making my proofs precise, detailed, and (hopefully) easy to follow. I also learned a lot from grading student's work, and realized how solid of an understanding I must have of a problem to really grade a proof properly. It was neat seeing the variety of ways different theorems and statements can be proven, and always exciting to see students come up with solutions that I had not considered.

Another big learning curve for me in my experience as a UTA was working with students in office hours. This also required a particular mastery and understanding of the course material so that I could help students with their proofs. The greatest challenge for me, but also I think the most effective strategy for helping students, was learning how to ask the right questions to help them through their solution. Over the semester I think I made very good progress in this direction.

I greatly enjoyed being a part of the UTA program and would strongly encourage other students to apply for it. Throughout this experience I have grown more confident in myself and my mathematical and teaching abilities and learned a lot through the weekly UTA seminar. I would like to thank Dr. Peca-Medlin and Dr. Upadhyay for hosting the seminars and running the program, as well as Dr. Parkinson for being a great mentor.