

General UT Scholarship Essay

Describe and evaluate one experience that significantly influenced your academic interests. The experience might be a college course, a job, a relationship, an extracurricular activity, or a profound event. Be sure to explain how this experience led to you setting the goals you now have for yourself, and why you think the academic program for which you are enrolled will help you to reach those goals.

"This is a course in linear algebra." That was the extent of Dr. Hadani's introduction to his honors linear algebra course. He then immediately began filling up the chalkboard with dense math at a speed that completely shocked me. While many of my friends were enjoying their "syllabus week," I was frantically trying to keep up with the intense lecture style of Dr. Hadani after my "syllabus five seconds." In that first lecture, I was exposed to more formal mathematics than I had been in my entire academic career to that point. Dr. Hadani taught me how to use mathematical logic and thought to prove things that I had always taken for granted, like the fact that the product of zero and any number is zero. After that first lecture, I knew I was about to be exposed to a whole different kind of math, but little did I know that this course would completely change my way of thinking and help me see the true beauty of mathematics.

Every time I went to Dr. Hadani's class, I knew I had to be completely focused and ready to go. He didn't teach out of a textbook, and he didn't even have a set of notes that he taught from. The only information that we got in the class was what he wrote at a blistering speed on the chalkboard. I spent the entire 50 minutes of each class writing as fast as I could to keep up with him. The lectures were taught at a high level and required hours of study outside of the classroom to digest them. He also assigned weekly homeworks that were brutally difficult. In these homeworks we were required to write out formal proofs of mathematical statements. This was my first experience to proof based mathematics, and it was definitely a "baptism by fire." I distinctly remember that one homework assignment's solutions took eight full pages to write out. Needless to say, this course was very difficult and pushed me to my mental limits. It was only after the course was over and I caught my breath that I realized how much of an influence Dr. Hadani had on me. His focus throughout the semester was that mathematics is a very simple subject when it is studied deeply. He showed us that almost every result in mathematics follows from just a few simply stated axioms. This showed me that every difficult and complex problem has a very simple core, and most of problem solving is just breaking a difficult problem down into its simple constituents. I found this viewpoint to be absolutely beautiful. It changed my way of thinking and helped me see the simplicity that lies in not only mathematics, but in life as well. Adopting this viewpoint made me appreciate physics and mathematics much more than I already did, and it made me feel certain that I was in the right field of study.

Dr. Hadani's course not only increased my love for mathematics and physics, but it made me realize that I want to influence the next generation of college students, just like how he influenced me. Because of this, I have set the goal of going to one of the top graduate schools in the nation and becoming a professor at a major university. I want to be able to show students the beauty of physics and mathematics, and hopefully make some great discoveries along the way. I am currently pursuing a double major in physics and mathematics, and I know that the difficult courses I am taking here at UT will prepare me for the intense study required of me in graduate school and after.