

I have a love of mathematics, statistics and computer science at all levels. I believe that everyone can be as interested and excited about these subjects as I am. This attitude has guided and motivated my teaching, pushing me to learn, adapt and grow. I had the opportunity to teach a graduate course on stochastic processes, co-instruct a graduate course on probability theory, teach three calculus courses and assist in teaching calculus and number theory.

I have many goals when I walk into the classroom. First, I try to establish a connection with students. I determine their majors, what classes they are taking and what they are expecting from the class. More importantly, I try to build a collaborative atmosphere. I accomplish this by beginning with probing questions about previous material, asking for input during examples, and taking appropriate pauses to answer questions. I even focus on my body language to reinforce this connection. Finally, I let my enthusiasm infect my teaching.

My best lectures occur when I successfully implement the above techniques to accurately determine the students current level of knowledge and teach from there. I think students should be informed where each lecture is headed and why. I use examples to motivate the material and place it in context. Utilizing course syllabi and in-class announcements I convey a clear understanding of what students should expect and what I expect from them.

Teaching a graduate course on stochastic processes was a rewarding experience, and taught me some important differences between preparing a graduate course versus an undergraduate course. The graduate students enrolled in my course were inquisitive, involved and paid close attention to details of the lectures. To properly prepare, I made sure my lecture notes and material were clean, clear and in-depth as possible. I spent sufficient time studying class material to enable myself to accurately answer any questions that sharp-eyed graduate students might ask about proofs and examples. For example, if I was about to present a proof of “A implies B” and the converse is not true, I would make sure to know a counter example.

In my lectures, especially graduate courses, I always try to expose students to areas of current and potential research. For example, in my course on stochastic processes I gave a lecture on models of DNA evolution. As this is one my areas of research, I remarked on current open problems and topics that might pique the students interest. I will promote undergraduate research in all future courses by advertising undergraduate research programs and presenting open problems. I know the importance of engaging students as early as possible, as the primary reason I went graduate school was my own undergraduate research experience. I know what qualities to look for in undergraduate students, such as self-motivation, attention to detail, curiosity, and a desire to contribute something original.

One of my greatest strengths as a teacher is my breadth of knowledge and experience. In addition to a Ph.D. in mathematics, I have a B.S. in computer science. Furthermore, during my time as a postdoctoral scholar at the University of Kentucky in the Department of Statistics, I expanded my fields of study, audited statistics courses, taught a graduate course in stochastic processes, and co-instructed a graduate course on probability. Additionally, I have also completed a wide range of courses during my graduate studies; Applied Linear Algebra, Applied Computational Harmonic Analysis, Functional Analysis to Topology, Abstract Algebra and Combinatorics to name a few. Given my broad background and training, I would be comfortable teaching pure and applied math courses, computer science courses and statistics courses.