

Teaching Statement

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“Good teachers know how to bring out the best in students.”-Charles Kuralt

Ever since I started learning in the classroom, I have held a deep respect and love for teaching. A child begins learning from his first day, and keeps learning everyday, but learning in the classroom is the first organized way of obtaining knowledge. I have had the good fortune in my education to have found some good classroom teachers who awakened my hidden enthusiasm in seeking knowledge in their art.

Mathematics has always come natural to me, and I find it to be a beautiful and fascinating subject. I find myself more comfortable solving mathematical problems than any other things that I do. I love teaching mathematics because it allows me to share my passion for it with others, and also I find it is the best way to uphold the beauty of mathematics. I have had the opportunity to teach Calculus, Vector Calculus, Geometry, Ordinary Differential Equations, Fourier Series, and other courses both in the U.S.A (at Clemson) and in Bangladesh.

I take teaching as a very serious responsibility, and I work very hard to prepare clear lectures and corresponding learning activities that highlight the important topics. I have found that keeping students interested and engaged is the best way to get them to grasp the ideas. I believe that classroom voice is an important link between teacher and student, and like to speak loudly and change tone frequently. I usually give a summary of the lecture at the end of my every class, as I have found this allows students who may have gotten lost along the way to catch back up and see what the key points were. For more remedial classes, I have found it is critical to move along with ‘baby-steps, but never be condescending about it. I get the answer of ‘How am I teaching?’, when I grade my students exams, home works, quizzes etc. I see the reflection of my teaching skill in them, feel joy if they do well and forget about all sorrows in my personal life for a moment. I feel teaching is not only a profession, it is also a strong bonding between student and teacher. When I enter the class room, look at them, I feel some innocent faces are waiting to learn something new from me and then it becomes my obvious responsibility to deliver my lecture in a best possible way. This is how I enjoy teaching as a teacher. I use technology in class when it is a net positive, and I believe students can benefit tremendously by the use of technology like Mathematica and Maple in the right situations. However, I am careful in technology’s use, as I have also seen it used to the detriment of students.

I always try to be helpful and respectful, but above all, fair to the students. I have experience working with students from different origins, different classes, and/or be diverse in other ways, but I give them my

full attention and support when they are in my classroom or anywhere else. When students ask me questions in my office hour, I first try to figure out his/her level of understandings then I answer it breaking down the problems step by step so that they can understand very well. Students appreciate the effort that I put forth, and have made comments in my Student Evaluations such as

Has a clear understanding of the math

He does seem like he cares for well being of the students

He was enthusiastic about the material, and was eager to teach

He was extremely knowledgeable and enthusiastic

He was clearly well learned in the subject and thoroughly understood how to do all problems

Moving forward, I will keep working hard and try to improve my teaching. Once I obtain a tenure track position, I look forward to discussing teaching methods with experienced professors so that I can learn from them.

Undergraduate Research: Recent advances in software, in particular freefem++, allow for students with no PDE or finite element knowledge to use finite element software to simulate fluid flow (they need to be motivated and talented senior, or very advanced juniors, with a couple CS classes already taken). With freefem++, they can fill in the details as they go about weak formulations, the necessary theory. The can start with Poisson problem, then to Stokes, then to Navier-Stokes, then to magnetohydrodynamics can be done in a semester. A second semester would allow them to do simulations with my new ideas. My advisor has advised at least 1 undergraduate student research project/year, for the last 9 years. My academic sister at UNLV (Monika Neda) also advises a lot of undergraduates.