

Teaching Philosophy

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After 20+ years of teaching experience, I find it hard to separate my approach to teaching and research from my approach to life in general. In essence, I believe in honesty, transparency, hard work, and respect. I approach life as a mathematician, and I see every day and every class as a puzzle that requires a solution. Every puzzle is different and may need a different approach each time, but at the end, it is always rewarding when it gets solved.

In my opinion, mathematics is a language, and as such, it must be learned by speaking it. On the first day of class, I always address the fact that English is not my first language and that's why I have an accent. However, I tell my students that I am fluent in math and that I will do whatever I can to help them "speak" the content even if they bring a "math accent" to my class. This statement is usually well received. It is perceived as a funny ice breaker, but it also shows that I am comfortable bringing my cultural identity and vulnerabilities to the classroom. I also tell my students that I take my classes very seriously, and that I expect them to do the same. I offer them my availability in and outside the classroom, an open line of communication, and my love and passion for the subject. I make sure to emphasize that their success is a function of their efforts, but I understand that it also depends on my ability to keep them engaged and motivated to do the work.

My philosophy has always been to communicate and collaborate with students at an equal level. Here is an interesting math problem, let's solve it! But in that process, it is important to recognize the different levels of mathematical maturity students bring to the table. One must have the patience and dedication to take students up to a point where they can learn effectively. There are talented students who can solve difficult problems with little effort, there are students who are great at following procedures, and there are students who are truly interested in learning but lack the basic math skills to formulate their intuitive ideas. For all of them there is a path to success, and I see it as my mission to find that path.

My delivery in the classroom changes from class to class and from day to day. Some classes are mostly a lecture, and some classes turn into mostly a problem-solving session or a workshop. In all cases, I always encourage student participation, and I make sure to answer every single question that comes my way. But I also address important questions not being asked and try to generate engaging discussions around them. For example, it is sometimes not enough to memorize a formula, and it can be insightful to understand why it works and where it comes from. Fortunately, Penn State Altoona offers small sized math classes, so it has always been possible for me to give individualized attention to my students. Whether I teach elementary school math, college algebra, calculus, differential equations, or a 400-level advanced math course, I always convey my respect and excitement for the subject, and my students regularly comment on my neat and well-organized blackboard work.

A modern aspect of college education is the participation in undergraduate research. At this point of my career, I look at undergraduate research not only as an opportunity but also as a necessary tool to provide the best educational experience for our students. For many years, I bought into the myth that it was rather impossible to involve undergraduate students in serious mathematical research. However, I am now convinced that with determination, creativity, and the right resources, it is possible to create research opportunities that have the potential to be life-changing for students and very rewarding for mentors.

In the last 7 years, I have worked on research projects with a diverse group of students. Collaborating with me, students are actively involved in the creative process of doing mathematics. They learn the meaning of perseverance and have the chance to improve their problem-solving and writing skills. I help them with the dissemination of new results, and I encourage their participation in research fairs, seminars, and conferences. While not every collaboration evolves into a prolific one, every journey has the potential to significantly change the way students remember their college years.