

TEACHING STATEMENT

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Teaching is an essential part of my experience at the University of Michigan. I've taught all introductory calculus courses. I've also worked as a lab instructor for Calculus III and Differential Equations in the Math department and a teaching assistant for Introduction to Cryptography in the Computer Science and Engineering department. Thinking back at all my involvement in teaching and learning, I've found that the essence of effective teaching lies in stimulating students' interest in learning.

There's an old Chinese poem saying that what you learned from the books is superficial and that you must practice to understand knowledge truly. This philosophy particularly applies to learning and teaching math. Students generally do not learn well by simply listening to their teacher's lecturing because they fail to be motivated and lose focus and interest quickly. Thus, I've strived to make my class interactive, stimulating, and cooperative since the first day of my teaching. For example, when explaining math concepts, I always start with real-life examples to let students see how the theory is inspired. When answering students' questions, instead of jumping to the correct final answer, I always ask about how they interpreted the problem and how they initially approached it. Then I try to give hints and discuss possible fixes to their approaches with them. Sometimes I even learn new ways of solving standard textbook questions from these productive, inspirational discussions.

I've also organized a lot of in-class group activities for students. On the one hand, working in groups makes the study more efficient and fun for students. On the other hand, students can attack problems that cannot be handled individually and see problems from different perspectives. I once organized a group quiz for students where they needed to work together to solve many challenging questions. Each individual on the winning team gets a few extra points on their next quiz. Students have said that they had a lot of fun while taking this group quiz. Assigning interesting homework problems is also an excellent way to spark students' interest in learning and help students better understand the course material. In fact, when I was a teaching assistant for the Introduction to Cryptography course, I got the chance to design many engaging questions for students. In one homework, we asked students to decipher an encrypted text. Given that there is no standard algorithm that could guarantee a solution, students need to be creative and explore all possibilities. Seeing their smiles after solving the problem, I could tell that they really liked this problem and enjoyed it.

Even before most university courses adapted to the online format, I was integrating technology into my teaching. I've put many of my teaching notes into the technical word processing system \TeX . During lectures, I've been writing course notes in the OneNote notebook, which I share with students. In this way, students can focus their attention on learning during the lecture, rather than mindlessly copying my board work, since they can refer to the notes any time. Due to the pandemic, technology has been used far more heavily in teaching. I'm enthusiastic about using all kinds of technology to maintain a relaxing and easy-going atmosphere for my class.

Teaching and learning are both evolving as time goes on. What stays the same is educators' care for students and our mission to provide them with the necessary help. Whether teaching online or in person, I am dedicated to motivate students and provide them with a productive, memorable, and happy learning experience.