

TEACHING STATEMENT

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My favorite part of teaching is that it is simultaneously pedagogical and relational. Not only do I get to teach students the math that I love, I also get to interact with students and guide them through their academic journey. Pedagogically, my goal is to develop in my students technical proficiency and a conceptual understanding that promotes their intellectual growth. To help achieve these goals, I strive to foster a learning environment where each individual student feels supported and encouraged to succeed.

Pedagogically, I try to engage students with what they already know and then build gradually upon that baseline understanding. For example, Calculus students—with sufficient prompting and examples—naturally have an intuitive idea of derivatives and tangent lines on graphs. At the beginning of a class on derivatives, I start by motivating real-life problems that necessitate the derivative, draw out students' intuition through basic examples, build up to the mathematical definition of the derivative, and then conclude with an explanation of how this definition matches their intuition. In teaching this way, the focus naturally shifts between periods of technical proficiency and conceptual understanding, and the varied layers of abstraction give students the framework they need to learn.

Recognizing the power of a compelling narrative, I structure each class as if I am telling a story so that there is a clear introduction, climax, and resolution along with a line of motivation throughout. This narrative structure naturally emphasizes conceptual understanding in the introduction and resolution, and these motivate the technical proficiency developed in the middle. Moreover, the clear structure helps students follow and engage with the lesson, as the story tells them where we are going and why we are going there.

These pedagogical perspectives are also reflected in my course materials. I try to anticipate the difficulties or conceptual misunderstandings students may have and write examples and practice problems that force students to clear up these issues. On homework or worksheets, I group problems around an important idea and write a sentence or two of motivation for the set of problems. I also choose assessment problems that focus not only on technical proficiency but also on conceptual understanding.

The learning environment that I create and the relationships I cultivate with students are just as important as my pedagogical techniques. Students enter my class with diverse backgrounds and levels of comfort or anxiety in math. These differences effect not only how students learn, but also what they believe they can learn. Trying to understand how best to teach the individual students in my class is one of my favorite components of teaching.

To address the variety of mathematical backgrounds in my class, I often give a quiz early in the semester that incorporates prerequisite material. This way, students get feedback on what they may need to review, and I get a picture of where my students are at mathematically. When I lecture, I try to anticipate my students' needs and provide a brief review of background material when necessary. Finally, when students do ask me questions about material from previous courses, I respond with patience so that students are encouraged to ask for help.

I also make a strong effort to get to know my students so that I can support their individual goals and personalities. At the beginning of a semester I like to ask students about their majors and post-college goals, and during the semester I like to ask about how their classes are going. Asking questions shows students my genuine interest in them and their personal goals, and it also gives me a good idea of a student's personality and passions. This helps me understand when a student might need affirmation, encouragement, or a more frank conversation about how to do better in class.

As student engagement is important in creating a supportive learning environment, I proactively promote my office hours to students. My first semester at LSU, I gave my students an extra credit assignment to visit my office hours during the two weeks of the semester and simply introduce themselves. The goal was to have time where I could learn the names, majors, and career aspirations of each of my students and to break their potential reticence to office hours: if students come to office hours at the beginning of the semester when stakes are low, they are more comfortable coming when they actually need help. The assignment was a great success and led to consistent attendance in my office hours. This engagement carried over into the classroom, as students who came to office hours felt comfortable asking more questions during lecture, and this set a culture of participation for the rest of the class.

In conclusion, I enjoy the privilege I have to teach and interact with students, and I work hard to see them achieve their goals. As each of my students deserve the best opportunities possible to succeed, I continually look for ways to develop and improve my teaching.