

Melody Molander's Teaching Statement

In the right environment, any student can flourish in mathematics. I believe that every student in my classroom should feel respected and supported. Students come from different backgrounds, and I strive to provide all students with high-quality mathematics instruction in a space in which they all can grow into stronger mathematicians.

In that vein, I'm always endeavoring to become a stronger educator. At the University of California Santa Barbara, I attended workshops and fulfilled additional requirements for the Certificate in College and University Teaching and the Certificate in Inclusive Teaching. Additionally, I developed syllabi for classes of 60-100 students, provided feedback on exams to enhance student learning, assigned homework, wrote exams, and planned lessons. I also managed teaching assistants, teaching them to run effective sections and communicate equitably to a classroom with students who each have their own best learning method.

I have long been passionate about quality instruction. I have repeatedly received high marks on my teaching evaluations. In 2020, 52% of my Linear Algebra student survey respondents rated my teaching as "Excellent" (the highest rating). In 2021, 68% of the student respondents of my Vector Calculus class rated my overall quality of teaching as "Excellent".

One student writes,

"Melody understood that each student came from different mathematical backgrounds. I also appreciated the amount of help she provided students with."

I strive to build a welcoming environment for the entire classroom. I encourage students to ask even "basic" questions by maintaining a relaxed classroom demeanor and being kind and understanding. I also make sure my students know that I'm available to them outside of class hours.

"I particularly appreciated how available and flexible the instructor was for students to contact, ask questions, and get help in their studies. The instructor's attitude was very positive and friendly which contributed to a very comfortable and welcoming learning environment," writes one student.

To support my students' general wellbeing, I like to invite a worker from the Food Security and Basic Needs program on campus to class to speak about navigating campus support programs. I don't know the situations my students are facing at home, and like to be accommodating when life is difficult.

"She was very considerate of the [COVID] situation and successfully made arrangements to help us learn such as creating a forum where we can ask for help from other students or her," one student writes. "For tests she was also considerate of how we may encounter troubles during the test such as internet problems etc and gave us plenty of time during the test so we can notify her or the TAs of a problem."

Unfortunately, there are substantial disparities in support services, treatment, and achievement, which are typically formed before the university-level. I aim to work to close the gap and create a more equitable and inclusive learning environment. In 2014, I partnered with the Oklahoma State Department of Education to create the state's first Math Teacher's Circle. The MTC provides guidance, materials, and resources that enable middle school teachers to promote open-ended problem solving as a way of learning, thinking about, and practicing mathematics in their classrooms that supports an equitable learning environment.

I also organized a Directed Reading Program where undergraduate students are paired with graduate students to gain exposure to and practice effectively communicating advanced mathematics. Students gained knowledge of advanced topics that often kickstarted their own research journeys.

I believe my students can succeed, and because of that, they do. I like to use active learning, a technique that has also been shown to foster mathematical creativity. I also give students opportunities during class time to think through how they themselves would solve a problem.

When lecturing, I believe in structuring class so that students not only get formal definitions, but also understand intuition, and how to apply the concepts to their needs. I first give a big picture overview of why they should care about the concept they will learn. Then I introduce the definitions and theorems, furnishing a plethora of ways to think about the concepts. I draw pictures on the board, and provide level-appropriate proofs, deeper-level insight, and worksheet problems that lead them to form their own conclusions based upon work done in previous problems.

After I present the relevant definitions and theorems, I like to give examples. I believe in starting with basic examples to give students confidence. Then we work through harder problems, understanding the power of the material they just learned.

I frequently pause my lecture to give students time to take in material and think about what their questions are. When I assign homework, I also believe in assigning problems of various levels. The easier problems at the beginning of the homework build the student's confidence and the harder problems build the student's intuition and understanding.

Students tend to like this, writing:

"Although sometimes challenging, the homework was a good fit to advance my understanding, and I felt it was the perfect level of difficulty. Overall, Melody Molander was instrumental in my understanding!"

I aim for my lectures to feel more like discussions. I ask questions with many answers and opportunities to discuss nuances.

"For each lesson, she clearly explained mathematical processes step-by-step in a manner that was easy to understand," a student writes. "As a student who has difficulty with mathematics, I truly appreciate that she refrained from using technical jargon when unnecessary because it made it easier to grasp mathematical concepts."

All students are capable of learning complicated and challenging mathematical concepts. My goal is to prove to future students that math can be useful, accessible, and fun.