A Few Words on Teaching

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sawyer-jack-1.github.io/teaching.html

By Spring 2026, I will have taught mathematics for ten consecutive academic years across a number of teaching positions and courses. These experiences have shown me that a modern math department is driven both by cutting-edge research and the need to deliver high-quality mathematics education to the student population. As demand for mathematics across STEM grows, I see it as a privilege and a responsibility for mathematicians to lead in pedagogy, curriculum design, and student mentorship.

Throughout my academic career, I have held various teaching roles. As an undergraduate at the University of Oklahoma, I worked as a tutor and a grader. In October 2020, I became a teaching assistant at UC San Diego during the height of the Covid-19 pandemic. In Fall 2022, I was appointed to a two-year term on our department's senior TA team, where I organized trainings for new TAs, served on department committees, and helped hire graduate student educators for specialized roles. Beginning in Fall 2024, I started working some quarters in the Halıcıoğlu Data Science Institute as both a teaching assistant and an associate instructor. In this role, I drafted a full set of lecture notes for the lower-division course Theoretical Foundations of Data Science, (available on my teaching page). Across all of these positions, I am grateful to have received stellar student feedback (samples of this feedback from 10+ courses are available on teaching page).

I have learned so many lessons from these experiences. For starters, working as a tutor during my undergraduate years taught me both how to effectively communicate challenging concepts at an accessible level and how to practice the art of understanding students' needs even as they go unspoken. Teaching courses on Zoom during Covid taught me that flexibility and adaptability are key skills for any educator, but on the other hand, I learned that students *really do* succeed at higher rates when they feel personally connected to their peers and instructors and are placed in systems that facilitate *accountability* and community. Serving as a leader in my department taught me the value of *service* (and about many of the unseen difficulties inherent in the politics of higher education and being in a role that requires difficult decision-making). Teaching as an associate instructor during my Ph.D. taught me how to design a course from the ground up, and how to balance the competing demands of research and teaching.

On a day-to-day basis, I try to model a few key princples. *First*, I hold my students to high standards and expect them to put in the work necessary to succeed. Simultaneously, I view it as my responsibility to provide them with the resources, support, and encouragement they need to meet those standards. This includes designing transparent and accessible grading schema; providing plenty of office hours and review materials; and being available for one-on-one mentorship. *Second*, I try to foster an inclusive and welcoming classroom environment where all students feel comfortable asking questions, making mistakes, and engaging in discussions. I do this by designing lectures that are engaging without sacrificing rigor, and by encouraging collaboration and peer-to-peer learning. *Third*, I strive to continuously improve my teaching methods by soliciting feedback from students, reflecting on my own performance, and staying up-to-date with the latest pedagogical research. Especially as we enter an era where education is increasingly dominated by AI, I believe it is crucial for educators to adapt and innovate in order to meet the evolving needs of students.