

Teaching Statement

As a student, I was drawn to courses that challenged me to think deeply because they transformed not only what I knew, but how I thought. As I progressed through my undergraduate education, I increasingly sought out classes centered on collaboration, projects, and laboratory work, where learning came through doing, questioning, and problem-solving rather than memorization. Those experiences shaped a belief that has guided my teaching ever since: I strive to teach the way I most wanted to learn. My goal is to create learning environments where students actively construct knowledge and develop confidence in their own ideas. I want my students to leave my classroom not only equipped with rigorous research skills, but more importantly to leave thinking like scientists with an understanding of how science can be used to advance environmental justice and improve the health of communities.

I see my role primarily as a guide rather than a lecturer. Every student enters the classroom with different experiences, interests, and ways of learning, and I adapt my teaching to meet them where they are. This same commitment to meeting students where they are shapes how I build inclusive learning environments: because students arrive with different backgrounds, prior preparation, and access to resources, I make my expectations explicit, offer multiple pathways for students to demonstrate understanding, and create space for questions that might otherwise go unasked. Rather than directing students narrowly toward my own research interests, I encourage them to pursue questions that genuinely interest them and provide the structure and support needed to investigate those questions independently. I have found that students learn most deeply—and remain most engaged—when they have ownership over their work. My role is to provide the tools, guidance, and feedback that allow them to build confidence while developing the habits of scientific inquiry.

This philosophy first took root during my undergraduate years at the University of Texas, where I took the Biostatistics course before its laboratory component was redesigned, and later served as a teaching assistant after the redesign was implemented. The original coding labs emphasized memorizing a small set of R functions, leaving many students unable to solve unfamiliar problems independently. To combat this, the redesign prioritized creating an environment for collaborative statistical reasoning. Working in small groups, students first determined which analyses were appropriate for a given research question before using R to prepare and analyze the data. As a teaching assistant for the redesigned course, I watched students become more confident problem-solvers — and learning to guide them through their questions rather than simply providing answers cemented both my teaching philosophy and my interest in academia. I saw firsthand that students learned more when they were challenged to reason through problems than when they were taught to reproduce solutions.

I carried this approach into my role as a teaching assistant for the Environmental Health Sciences Capstone course at Columbia University. Student teams partnered with organizations such as WE ACT for Environmental Justice and the Natural Resources Defense Council to conduct applied research addressing real environmental health challenges. Throughout the semester, I mentored teams and provided detailed feedback as they developed research questions, refined analyses, strengthened scientific writing, and communicated findings to community partners. I also delivered workshops on data visualization and scientific writing, emphasizing that clear communication is as important as rigorous analysis. Working with students in this iterative way reinforced my belief that teaching is an ongoing dialogue rather than a one-way transfer of information. For this work, I received the Award for Exemplary Teaching Assistants in Environmental Health Sciences, recognizing doctoral candidates who demonstrate exceptional commitment to course development, student mentorship, and teaching.

This same commitment to meeting learners where they are shapes how I communicate science beyond the classroom. Whether presenting to clinicians, community organizations, or academic audiences, I carefully consider what my audience already knows and where additional context is needed. During a 2026 American Academy of Allergy, Asthma & Immunology conference presentation to a primarily clinical audience in Philadelphia, PA, for example, I spent less time reviewing biological mechanisms and instead focused on building intuition around the statistical methods, using simple visualizations to explain model structure and interpretation before introducing the study findings. This approach has resulted in consistently strong evaluations of my presentations, including comments that I was an “exceptional speaker” from attendees. I also view teaching as an evolving practice rather than a finished skill. I am currently enrolling in a pedagogy course to deepen my understanding of evidence-based teaching practices, partly because I believe students benefit from seeing that learning is lifelong, and that effective teaching requires continual reflection and refinement.

A recent experience reinforced my belief that the most meaningful learning occurs when students are trusted to pursue their own curiosity while receiving thoughtful mentorship along the way. During my final year of doctoral training, I mentored a high school student participating in an internship with a study I helped lead. Rather than assigning him a predefined analysis, our team began by asking what he was genuinely curious about. He wanted to understand how other students experienced participation in the study, what they learned, and what they hoped would happen next. Together, we developed a questionnaire and facilitated a focus group to answer those questions. He ultimately presented his findings at the Breaking the Cycle conference in Atlanta, GA, confidently explaining both the study design and its implications during the question-and-answer session. Many attendees were surprised to learn he was still in high school.

What stood out most to me was not simply the quality of his presentation, but the confidence that came from investigating a question that mattered to him.

Across each of these experiences, my approach to teaching has remained consistent: center the student, prioritize inquiry over memorization, adapt to the learner in front of me, and continue growing as an educator myself. I evaluate my teaching not only through formal feedback, but by whether students leave more capable and more confident than when they arrived—able to analyze data thoughtfully, communicate scientific findings clearly, and pursue new questions independently. Ultimately, I hope to train scientists who understand that research is not simply about generating knowledge but about using that knowledge responsibly to improve environmental health, inform policy, and serve the communities most affected by environmental injustice.