Teaching Statement

Teaching is one of the main reasons that attracts me to a career as an academic. As such, I value teaching equally important as research and consider it an essential component for training the future leaders of our field. Although I have had experience teaching in a variety of disciplines ranging from atmospheric science to statistics, I have a set of core teaching philosophy that remains the same regardless of the courses that I teach. They can be summarized by the following:

- Teaching should be student-centered. There is no one-size-fits-all solution to teaching. Every student is different and it is the responsibility of the instructor to find ways to convey the material to each student in his or her classroom.
- Students are more attentive and willing to learn when the instructor is more engaging and passionate about the lecture material.
- Learning experiences are enhanced through student-to-student interactions and group work.
- Student attention does not come through a plethora of rules and regulations; rather, student attentiveness should be earned through engaging teaching and reciprocated by instructor attentiveness and availability both inside and outside the classroom.
- Effective teaching and learning are generated through an iterative process: instructors should actively and regularly solicit feedback from students beyond the standard mid-course or end-of-semester evaluations in order to make immediate adjustments as needed.

These core beliefs have directly translated into teaching strategies that I implement in the classroom. Some specific examples include:

- Personalized learning: I actively make an effort to get to know all of my students, including learning their names, research interests, and meeting with them one-on-one throughout the semester whenever possible. In explaining challenging concepts during lecture, I include multiple ways of conveying the same material based on the four primary learning styles (visual, auditory, reading/writing, and kinesthetic).
- Classroom engagement: I keep the classroom environment dynamic by making lectures highly interactive. Students are encouraged to interrupt me at any time with questions or comments and I incorporate anecdotes and case studies to make sure the lecture material stays interesting at all times.
- Cooperative learning: Students often learn better when they are in a group. Whenever possible, I will try to implement student-to-student engagement in my courses. These can come in the form of Think-Pair-Share exercises, entire class periods dedicated to team-based learning activities, and group exams/presentations.
- Feedback: in addition to pre-course, mid-course, and final evaluations, I ask students to provide feedback after each class session in a short survey. Whenever applicable, students also complete self-evaluations and peer evaluations to assess groupwork effectiveness.
- Availability outside the classroom: I allocate at least three hours a week outside the classroom to meet with students during office hours. Additionally, I send weekly communications to my students over email and respond to all inquiries within 48 hours.

Although I have not yet taught a course independently, I have had extensive experience as a teaching assistant, course mentor, and teaching scholar throughout my undergraduate and graduate training. To date, I have facilitated 14 different courses for a total of 19 times. The courses range drastically in size, from seminar style discussions of six people to large lectures of over 500 students, and I have served a variety of roles in these courses, from grader, student mentor, recitation/laboratory instructor, and course co-instructor.

My background in working with students across a variety of disciplines and age groups have provided me with invaluable experience and versatility in both the style and size of courses that I am comfortable with teaching. I have a strong research background in environmental epidemiology, applied statistical methods in environmental health, and health impact assessments and would feel comfortable teaching courses on related topics at both the undergraduate and graduate level. Additionally, my current postdoctoral position will provide me with additional training in air pollution exposure modeling, molecular mechanisms, and methods in causal inference, all of which further contribute to my versatility as an instructor in the breadth of courses that I could comfortably teach.

My philosophy for mentoring generally reflects on my core philosophies for teaching, with a few additional key beliefs. First, above all else, I believe that it is the responsibility of the advisor to foster a positive work and learning environment in the lab group that is built upon collaborations at all levels. Weekly group meetings, joint research projects led by group members, and regular team-building activities are all essential components to a successful research group. It is also the advisor's role to identify suitable research projects for advisees based on his or her areas of expertise and future career goals. Furthermore, advisors should be flexible to mentoring style depending on the specific needs and working style of a student: some may benefit from a more hands-on approach, while others may benefit from working more independently. During my doctoral training, I have successfully mentored two master's level students: one is now a current PhD student in the Columbia Climate and Health Program, and the other currently works for one of China's largest hydroelectric power company.

I am constantly looking for new ways to improve my own teaching. I believe that it is imperative for instructors to continuously treat effective teaching as work in progress and actively seek out new tools, methods, and technology that arises constantly in education research. To this end, I was an active participant in Columbia's Center for Teaching and Learning (CTL), attending numerous workshops, seminar series, and teaching institutes. I have also completed the CTL's Teaching Observation Fellowship as well as the Advanced Track of the Teaching Development Program, receiving formal training in course design, evidence-based educational research, and student-centered learning approaches.