As a professor I provide for students' intellectual growth by fostering creativity and rewarding commitment. My highest goal is to help students learn how to be attentive to and make sense of their local, regional, and global environments.

I teach ecology because I believe in two things. First, everyone has the right to an informed ecological relationship with the world around them. This entails knowing how ecological information is generated. I believe this is best done through teaching scientific literacy via thorough engagement with the scientific method. It also entails developing the skills to build a sense of shared ecological consciousness and awe. I believe this is best done through creativity, play, and reflection, all of which can be promoted with artistic approaches to the natural world (e.g. STEAM pedagogy, which integrates science, technology, engineering, and math with art). Second, learning is "not a gift, not a self-achievement, but a mutual process"[1] that knits us together as a society. Building meaningful relationships with others through learning is profoundly important work for achieving a more stable and just world ecologically and socially. I teach towards these aspirations.

My five commitments for effective postsecondary teaching are:

- To maintain steady social awareness, emotional literacy, and situational flexibility for a comfortable and safe learning environment
- To track growth in ecological reasoning with diverse techniques and assessment modalities
- To incentivize the ability to sustain attention and connection to the ecological world
- To encourage self-sufficiency, responsibility, and collegiality
- To model respect for all students as adults with agency and intelligence: come prepared, know the material, and engage deeply and fairly with student efforts as an equal

My teaching and mentoring abilities are strong because my experience is highly varied. Over the last 15 years, I am proud to have: advised independent, published student research at the undergraduate, master's and PhD level; taught ecology, biology, evolution, and environmental issues to major and nonmajor undergraduates; tutored groups and one-on-one in maximum- and medium-security prisons and university settings; and run an undergraduate biostatistics lab with hundreds of enrolled students while managing eight teaching assistants.

Perhaps the most important lesson I've learned is that teaching is about creating an environment where deep learning and creative thought can emerge. In what follows I detail experiences that have informed this view.

Lesson 1: Meet students where they are. This lesson is evergreen. At the Fashion Institute of Technology, I came into teaching *Ecology and Environmental Issues* with the (silly) expectation that students at a postsecondary school focused on the fashion industry would not be much different from the nonmajor students at more scientifically focused universities I had taught in the past. I was wrong – in my first lecture, I asked students what their favorite organisms were as an icebreaker and received blank stares – many didn't know what I meant by "organism!" I immediately knew I had to adjust my expectations, and subsequently fine-tuned my planned lectures, assignments, and assessments from teaching core ecological concepts in depth to an emphasis on basic ecological concepts, scientific literacy, and human-environment interactions as they related to the fashion industry. In *Creating Art, Thinking Science* at MIT, students of art, architecture, and design students worked with volunteer scientists from across the MIT campus to make works of art/science. Fostering successful collaboration between the art students and volunteer scientists depended on my ability to listen and speak the language of each discipline: when artists and scientists both felt understood, they were more invested in doing something unfamiliar, like working across disciplines. I helped students understand what a scientific perspective could offer their artwork, instructing them on the basics of the scientific method to demystify how scientific knowledge is built, and helped students receive laboratory training and access, which created common ground with scientists on campus and allowed for truly interdisciplinary projects.

Lesson 2: Less is more. To teach a writing course at Cornell University, *Writing in the Majors*, I took a half-semester class to learn how to design, teach and evaluate writing and develop class materials. The main project of

[1] Freire, Paulo. 2005. *Pedagogy of the Oppressed*. 30th Anniversary Edition. New York, London: Continuum, p. 8.

the class was to teach students the scientific method through writing a scientific paper from start to finish. I also gave smaller assignments throughout the semester to introduce students to stylistic differences between scholarly scientific writing, policy writing, and writing for the public. While the main project greatly improved students' skills in ecological reasoning, it was clear during regularly scheduled check-ins that the smaller assignments overwhelmed and distracted students from the core goal of the course. Teaching it a second time, I found that a focus on building one main project consistently throughout the semester was more effective and produced higher quality work from the students.

Lesson 3: Trust but verify. As a lecturer on a teaching team at the University of Queensland, my role was to run two labs for an introduction to biostatistics course of about 300 enrolled students. My main tasks were to write and maintain the lab manual for statistical coding in R; to brief eight TAs every week about the content of the lab; and to lecture and manage the classroom. As a manager, I encouraged TAs to write down pointers and notes for the team where they foresaw issues with the content of the lab, which was a way to show I trusted their judgement while confirming their understanding of the content. During labs, I provided short lectures to introduce concepts, but most of my time was spent visiting each student to chat with them about the material as they ran through it, asking questions to check their understanding along the way. The class was successful because I was able to pair a trusting and self-directed style while challenging students to show me what they knew. Every student was entrusted to work on their own and at their own pace, with the understanding that I would still hold them accountable for their learning. Making my rounds consistently also reassured students that if they ever felt stuck or lost, I would be there to work it out with them without shame or embarrassment.

TEACHING AT DEEP SPRINGS

My experience leading introductory ecology, environmental issues, biostatistics and scientific writing courses has positioned me well to teach their equivalents at Deep Springs. I would additionally be very interested and immediately capable of teaching courses in field ecology, ecological methods, experimental design, or their equivalents.

In teaching any introductory ecology or environmental biology course, I would model my class based on successful elements drawn from previous syllabi, paired with an ongoing art-ecology outreach project I am developing entitled *Patchwork Ecology*. In each iteration of this project, I make a series of visits to a certain patch of land – a backyard, a winery, a cemetery – over the course of a few months to a year. For each visit, I select different focal taxa on which to make observations of species richness, abundance, and behavior using standard ecological field techniques. At home, I write profiles of select ecological relationships and research the environmental, ecological, and land use history of the patch. This information is curated into a creative project to share with the folks who own, manage, or visit the area (for example, an illustrated guide to the land as a printmaking project). The *Patchwork Ecology* model can be adapted for teaching across core ecological concepts and practices, human-environment interactions, and the scientific method. Informed by STEAM teaching approaches, this model will be fine-tuned according to the goals of the course and the interests of the students.

In advanced courses, I plan to explore the integration of art and science in ecology with upper-level students. For example, I propose teaching seminar/studio hybrid courses. Open to students from any background, the courses would cover how artistic versus scientific research and methods converge and differ from each other. Working collaboratively, students could (for example) produce works that engage with nature-based environmental solutions as eco-art projects, or design scientific experiments for ecology that feature artistic practice in one of the main components of the scientific method. These courses would invite interinstitutional visitors to give talks, critiques, and feedback to students as their projects develop.