I am a first-generation student. The struggles I faced have led me to be empathetic and continually enhance my teaching style to identify and meet the needs of the students I have, as to maximize the likelihood of reaching and surpassing my rigorous education goals. Ultimately, I hope to teach students the skills to take in information, evaluate it, and then communicate what they know about that information so that the benefit they receive from the university goes beyond their time in attendance, regardless of their background. I work to achieve this through self-assessment within the classroom throughout each of my semesters. This leads to my three primary teaching goals:

Shape students' understanding of science and the scientific process while using an interdisciplinary approach spanning biological perspectives and foundational principles. I am an interdisciplinary scientist. From individual stress and disease assays (Crespi et al. 2015), to regional landscape genetics and microclimate measurements (Seaborn et al. *in revisions*; Seaborn and Catley 2016), I constantly strive to bridge the gaps across disciplines while simultaneously integrating these skills to help students develop their knowledge on the foundations of science. I aim to teach my students to evaluate the world this way so that they have a better understanding of how each biological perspective is intimately linked. Stress physiology determines the species range. Genetics can inform us about how individuals move across the landscape. The list continues. I want students to see that the GIS or survey methods I taught them in lab can transfer not just to other systems or multiple career paths, but also help us develop inferences down biological perspectives and build an overall greater understanding of a species. This can be seen in the range model labs I wrote for the herpetology class, which moves students form physiological processes to landscape ecology inferences, then landscape ecology patterns back down to inferences on physiology. This integrates with my lecture and is assessed in exam questions and an extensive paper. Asking for immediate feedback on the lab has led to me making improvements after each section and semester. Sometimes my approach is simpler and more informal: ask students at the end of lab why we did something or how it informs us about another perspective.

Increase critical thinking skills and the ability to apply those skills to a broad range of topics while creating their own conceptual framework for the natural world to promote life-long learning and external connections. One of the most important aspects of attending a university is to leave with lessons that will provide a benefit over the course of a person's lifetime that may be difficult to develop on their own. Critical thinking may be one of the hardest skills to teach yourself. I believe each lecture and lab need to incorporate questions which match the learning outcomes for a range of careers. For example, searching the primary literature for a scientific paper on biology or education may be one learning outcome. This is an important skill for everyone from a high-school educator to a U.S. Fish and Wildlife employee. This same skill can be used to fact-check a post seen on social media. However, the ability to properly evaluate the paper, to be able to see the flaws and the successes, needs a level of mentorship and correction, sometimes through peers. I believe using think-pair-share and Problem-Based Learning labs are easy way to assess critical thinking in a low-pressure environment. Critical thinking is not developed by teaching at someone. Sometimes this is simple, like asking the herpetology class at the start of the niche lecture, "what is a niche?". This allows students to evaluate what they know from other classes, while also evaluating what other students bring to the table as they come from multiple colleges. This encourages them to use critical thinking skills across classes while seeing and evaluating perspectives across disciplines. I also think it is important to match the tools for the skills to the greatest audience. For instance, the GIS labs I have written use QGIS, which is free, as opposed to ArcGIS, which is thousands of dollars. Although ArcGIS is readily used in government agencies, if a student goes to a high school or a not for profit, they may be limited in their funds to help students understand maps and landscapes. My hope is that students leave each class not only knowing something new or the basics of a new skill, but also the critical thinking skills to understand how to continue to grow themselves, the skills, and adapt to new, ever-growing, knowledge.

Develop practical skills applicable to a wide-range of potential careers and disciplines. Several skills developed through STEM have direct consequences on performance within other fields, such as education, including critical thinking, as discussed above, and communication. For communication, I've helped students develop skills through grading and giving feedback on lab reports and presentations. On a smaller scale, I've advised a handful of undergraduates who have presented their research they did with me either at the local research symposium, honor's thesis defenses, written documents, or some combination of these. One exciting aspect of working at a school with a low student to faculty ratio, is that the amount of time for feedback and developing skills would be greater than at a traditional R1. My personal ability to communicate was more positively impacted by smaller classes. This is an important value for the university I want to be a part of because I have experienced the challenges of teaching a lab of 10 students vs. 25 and giving a lecture to 15 vs. 85. I've also sat, as a student, in classes of 10 and seen the benefit compared to my classes of 700 in the ability for me to refine skills.

Teaching at Your School

I use this space to develop specific teaching plans and potential courses for each university I apply.