Teaching Philosophy

As a first-generation college student from a small Appalachian town in West Virginia, I recall the flood of excitement I felt as I first stepped onto the campus of Wake Forest University on a swelteringly hot August day. I was almost overwhelmed by the thought of all of the opportunities that lay before me, and confident in my abilities and preparation. However, I soon realized that I was not as prepared, nor as accustomed to putting forth the amount of effort required to excel at a place like Wake Forest. I struggled my first year, earning a few Bs and a lot of Cs, as I attempted to adjust to my new situation. But I was determined to do whatever was necessary to succeed in this new, challenging environment. I learned to work harder and smarter, and did much better my sophomore year. By my junior and senior years I was consistently on the Dean's List and eventually graduated cum laude with a B.S. in Biology. However, I did not do this on my own. I was exceedingly lucky to be pushed, guided and mentored by many incredible faculty that took a personal interest in my progress as a student and in me as a person. In particular, in my junior year, Dr. Peter Weigl took me under his wing and introduced me to the fascinating worlds of ecology and evolutionary biology. I became hooked, and devoured everything I could on the subject. Following my junior year, I was accepted into the Summer Undergraduate Research Experience (SURE) program at Wake Forest, where Dr. Weigl served as my faculty mentor. This was an incredibly formative time, as I learned how to do research and present it at scientific meetings.

Dr. Weigl went out of his way to support me in myriad ways, including financially. My family and I struggled to pay for me to attend Wake Forest, and Dr. Weigl often paid me to help him cut firewood and prune trees on his orchard. In my senior year, Dr. Weigl offered a course in tropical ecology and evolution in Ecuador that I wanted to take more than anything in the world. I was fascinated by Alexander von Humboldt and Charles Darwin, and dreamed of following in their footsteps through the Andes, Amazon basin and Galápagos Islands. However, there was a problem; because of the travel, the cost of the course was quite expensive and I simply didn’t have the means to pay for it. Knowing my situation, Dr. Weigl found a way to help me to secure most of the funds to pay for the course through the University. My time in Ecuador was probably the most transformative experience of my life; it solidified my fascination and love for ecology and evolution, and inspired a love for travel and for experiencing new places and cultures that continues today.

I recount all of this to emphasize the remarkable difference that one or a few teachers can have on someone’s life. This is the kind of Professor I constantly strive to be. And while I try to provide opportunities to students from all backgrounds, I have become increasingly focused on involving those that are from groups that are traditionally underrepresented in the sciences, such as first-generation college students, women, and students of color. My teaching and research in Ecuador have allowed me to take dozens of students from UNCW there, and in turn, I have been able to support Ecuadorian graduate students in my lab at UNCW. Despite these efforts, the events of the past few years have made me even more aware and determined to do more. To this end I have become involved in groups like SACNAS (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) and WISE (UNCW Women in Science and Engineering.

There are many things that go into being an effective teacher at the University level. I embrace the “Teacher-Scholar Model,” wherein I try to balance my roles in teaching and research in such a way that each positively impacts the other. I include students at the Undergraduate and Graduate level in almost all of my research, giving them hands-on opportunities that they would be unlikely to find
elsewhere. I actively incorporate my research into my course materials. This allows students to make a personal connection with what they are learning and also means that I am constantly adding new content. My role as a scholar also means I have to stay apprised of the current literature on many topics that also happen to be related to the courses I teach. Thus, I view my role as a scholar as absolutely essential to my success as a teacher, whether it be in the large lecture-only courses I teach, such as Conservation Biology, medium-sized courses with labs, such as Mammalogy, intimate and demanding field courses such as my Tropical Ecology course in Ecuador, Graduate courses in Evolution and Diversity, or the discussion- and presentation-based senior seminar courses I regularly teach. Likewise, I believe I am a much better scholar because of the work I put into making my courses the best they can be. I believe a professor has to be adaptable and flexible and willing to continue to hone their craft throughout their career, especially when they teach many different types of courses.

In addition to traditional classroom teaching, I try very hard to provide extra opportunities for all my students, and given the continuing paucity of minorities and women in STEM disciplines (and on University Faculties in particular), I try especially hard to encourage, inspire, and empower students from these under-represented groups to pursue graduate studies and careers in science. So many of the students in these under-represented groups are amazingly talented, but they haven’t yet fully realized that, and therefore they have difficulty envisioning themselves as future professors or professional scientists. I view helping them to realize that they can indeed reach such goals as one of the most important things I can do as a professor. To that end, I do my best to expose my students to opportunities and to help them take the steps necessary for them to be successful. I spend a great deal of time writing letters of recommendation for current and former students, stay in touch with many of them long-term, and frequently send them information on opportunities in which they might be interested or for which I think they are especially well-suited. Although this perspective on my role as teacher and mentor means I probably publish etc. a little less than I could otherwise, I have never regretted my choice to focus most heavily on teaching and mentoring students. Early in my career as a professor, I realized that the most positive way I could impact the world was by helping students to become successful themselves—successful in their careers, successful as people of high character, and successful in terms of being thoughtful and caring citizens of the world. Although I’ve been fortunate to publish some high-impact papers, help launch initiatives such as the construction of the WildSumaco Biological Station in Ecuador, and have gained my fair share of recognition for my scholarship (both inside academic circles and from prestigious media outlets such as National Geographic, Science, and Discover magazines), I firmly believe that my most enduring legacy as a professor lies in the students I inspire and whose lives I impact in a truly meaningful way.

There are 9 basic principles that form the foundation of my teaching philosophy:

1. **Inspire students.** Foremost, I believe we have to inspire our students— with enthusiasm, attitude, and by overall example. We have to show them that we are excited about the material we are teaching and importantly, why it is exciting. I use many different teaching methodologies in class, including traditional lectures, use of museum specimens and videos, updates on my research or relevant research of colleagues I know, and whenever possible, hands-on experiences. Paramount in all of this, however, is to inspire them. If you don’t inspire your students you have lost them.

2. **Challenge and empower students.** My courses are not easy. I tell my students up-front that they will not be. However, I also let them know that I believe in them and that I am there
to help them succeed. I do expect a lot of my students, but I also expect a lot of myself when it comes to helping them successfully navigate a course and to master the material.

3. **Help students to learn to think critically and to synthesize knowledge.** One of the reasons that my courses are fairly difficult is that I emphasize critical thinking and the ability for students to synthesize concepts—to constantly look for connections between various concepts. It is not enough that we expertly teach our students factual information; we must teach them to always search for conceptual interconnections.

4. **Use concepts as a framework for teaching facts.** I think very carefully about how I am going to use conceptual frameworks in my courses so that students understand how facts relate to a broader context. For example, in my Mammalogy course, I strongly emphasize and constantly reinforce the evolutionary tree of mammals as a conceptual framework on which the students can hang all of the facts they will learn. Providing the students with an explicit conceptual framework that they truly understand makes their learning experience so much richer than it would otherwise be.

5. **Be professional and respectful.** This should be obvious, but I still believe it is very important to constantly act professional and to be respectful to your students. This includes being on time and being prepared (by both being on top of the material and being mentally prepared to do a good job teaching each and every class period).

6. **Encourage students to pursue their dreams and give them honest feedback.** A lot of students come to me for advice. Many of them have an idea of what they want to do in the future, but not how to get there. Some also need a bit of a push to believe in themselves enough to take positive actions to reach their goals. My goal is not just to be positive and encourage them to follow their dreams, but to give them frank and honest information on what it takes to reach their goals and whether or not they are doing what they need to be doing to get there. I believe this is one of the most important services we can provide to our students.

7. **Be a good role model, both as a professional and as a person.** We are role models for many of our students, whether we want to be or not. As such, it is important to be cognizant of that and act accordingly. In my opinion, our responsibility is not just to be a good professional role-model, but to also be the type of overall person that they can look up to as well.

8. **Remember that just a few minutes of my time can make a huge difference to a student.** Faculty are busy people and it is all too easy to rush interactions with our students and colleagues. However, it is important to remember that just a few minutes of my time can make a world of difference to a student. I know this was the case when I was a student and it is one of the things that I really try to prioritize as a professor.

9. **Never forget how lucky I am to be a professor.** As faculty members, our jobs aren’t perfect. But, in the big scheme of things we are incredibly lucky to be professors in so many ways. I try to keep this in mind, especially on the hard days. Generally, our worst days are better than the best days for literally billions of people.