My teaching philosophy is grounded in the conviction that students learn best when they are actively engaged in discovery, challenged to think critically, and encouraged to connect academic inquiry to lived experience. Over the past decade, I have taught in classrooms, field sites, and zoological institutions across three continents, always with an eye toward cultivating curiosity, analytical rigor, and independent thought. These diverse teaching contexts have reinforced my belief that experiential learning (e.g. real world case studies, field-based learning, hands-on activities, etc.) fosters independence, confidence, and a deeper connection to science.

Teaching Approach and Pedagogical Values| My teaching emphasizes dialogue, critical reasoning, and adaptability. For example, in my scientific thinking courses at the American University in Cairo, I used seminar discussions, writing assignments, and debates to train students to analyze evidence, articulate arguments, and question assumptions. I extended this approach in modules on animal cognition, where students evaluated competing theories of intelligence, personhood, and theory of mind. To assess and refine my teaching, I incorporated mid-semester surveys and encouraged students to help shape the direction of the course. I envision continuing and expanding this practice at Deep Springs, where student participation and self-governance are central to community life. From the first week of class, I would invite students to vote on which topics we emphasize and what formats— seminar, field-based, or project-driven—best serve our collective learning goals.

My supervisory style emphasizes a holistic and supportive approach. By providing structured guidance and regular feedback, I help students navigate the complexities of research projects while developing critical skills in scientific inquiry and analysis. I place a strong emphasis on professional development, encouraging students to engage in interdisciplinary collaborations, attend conferences, and publish their findings. For example, as affiliated faculty in the Department of Psychology ABC program, I supervised master's student Victoria O'Connor. Under my guidance, she won the Graduate Women in Science Award, presented her work at conferences, published her findings, went on to complete a PhD and secure a permanent zoo position. At AUC, I led a collaborative project with graduate and undergraduate students examining the interplay between lion behavior, physiology, and environmental stress at Giza Zoo. This initiative evolved into an ongoing master's student project; I am co-supervising MSc student Samar Noaman. At the University of Konstanz, I supervise bachelor's students developing theses using data from my field studies, providing training in R, statistics, and literature review.

Proposed Courses| Through my courses, I aim to equip students not only with disciplinary knowledge but also with the critical thinking, ethical reasoning, and communication skills essential for leadership and service. At Deep Springs, I also look forward to serving on standing committees (such as Curriculum, Admissions or others) with students, collaborating with them in making decisions that shape the academic program and community life, as Deep Springs' governance model demands.

I am prepared to teach a wide range of courses, from foundational classes in General Biology, Ecology, Environmental Science, and Zoology to advanced seminars rooted in my expertise. My extensive experience in science communication, as a television presenter and consultant for international networks such as PBS, BBC, Smithsonian Channel, and National Geographic, and as a contributor to books, podcasts, and popular science outlets, also equips me to teach courses in writing and presenting scientific ideas to diverse audiences.

Given the four-course per year load, I would design courses that are both rigorous and sustainable, offering seminars, field-based, and student-led formats in a balance that maximizes depth without sacrificing personal mentorship. Potential offerings include:

> **From Animal to Man: The Evolution of Intelligence**
> This seminar explores the evolutionary drivers of cognition across species. Students examine how intelligence is defined and measured, the ecological and social pressures that shape its

evolution, and how it has emerged across taxa (e.g. dolphins, primates, corvids, carnivores, and humans) to reveal diverse pathways to advanced cognition. My research program provides a strong empirical foundation for this course: I would integrate examples from carnivore cognition, including my own work on lions, into a broader comparative framework alongside primate studies, highlighting both convergent and divergent trajectories in social and cognitive evolution.

Ethics, Welfare, and Conservation
This interdisciplinary course examines how scientific research intersects with animal welfare, conservation practice, and ethics. In addition to teaching core principles, I use case studies to highlight the complex trade-offs at the intersection of these fields. For example, canned hunting illustrates critical distinctions: a lion raised in captivity for sport raises profound ethical questions; conservation impact is neutral since wild populations are unaffected; welfare depends on conditions of care and the humaneness of the hunt. To ground these issues in a North American context, students also examine cases such as wolf–livestock conflicts in the western United States, or the recovery of the black-footed ferret, which depends on the conservation of prairie dog populations despite their status as agricultural pests. These case studies provide fertile ground for discussion and debate: there are no simple 'right answers,' and students must grapple with the reality that ethical, conservation, and welfare priorities often conflict. By wrestling with these complexities, students learn to analyze evidence, articulate reasoned arguments, and engage in open-ended inquiry.

Field Course: Ecology & Adaptation in Desert Systems
The course will also examine behavioral plasticity, drawing on my research showing how cooperative and social strategies shift under different ecological contexts. Comparing resource-poor and resource-rich environments offers clues to how global climate change may reshape animal behavior. This immersive course introduces students to ecological fieldwork while leveraging the unique environment of the Deep Springs ranch. Students will gain experience with both classical and modern field methods, from telemetry and ethograms to vegetation transects and irrigation studies. For example, building on my experience working alongside San trackers in Botswana, students will also learn the principles of wildlife tracking, combining these skills with modern tools such as telemetry. Course activities may include investigating ecological adaptation in desert systems through behavioral observations, vegetation analyses, and water-budget studies, with comparisons between the Owens Valley and the Kalahari.

These courses highlight the breadth of my expertise while aligning with Deep Springs' liberal arts mission. Each emphasizes interdisciplinary connections to philosophy, ethics, history, and governance, ensuring that students see science as a way of engaging with the world, not as an isolated domain.

Additionally, I will make my existing research datasets available for student-led projects, enabling them to test their own questions using data collected from lion populations across African ecosystems. I also bring specialized research equipment, including telemetry and related field tools, as part of my research program, which can be integrated into these courses to give students hands-on experience with modern ecological methods.

Diversity & Inclusion | My teaching has long been concerned with making science accessible to students from all backgrounds. I have received multiple fellowships aimed at increasing student participation in STEM, including an NSF *Science Made Sensible* Doctoral Fellowship and an NIH *Initiative for Maximizing Student Development* doctoral fellowship. I view diversity and inclusion not as add-ons but as essential to producing strong science and equitable education.

In the classroom, I prioritize accessibility and inclusion. At AUC, where most students were non-native English speakers, I used multimodal instruction (oral, written, and visual formats) to ensure equitable access to content. I also incorporated structured discussions and low-stakes writing assignments, which gave students multiple ways to demonstrate understanding and build confidence. These approaches improved participation and engagement, particularly among students who might otherwise have been marginalized by language barriers. Such practices align directly with Deep Springs' emphasis on small, seminar-style learning where every student is expected to participate fully and shape the collective intellectual life of the college.

I also expose students to global voices in science. For example, I integrate "Video Conference Talks" with international researchers into my courses, giving students direct conversations with conservation scientists working in Africa and beyond. These exchanges broaden cultural horizons and help students see themselves as participants in a global scientific community. At Deep Springs, I would extend this practice by connecting the college's uniquely intimate setting to broader networks of knowledge, ensuring students appreciate both the local and global dimensions of scientific inquiry.

My commitment to diversity extends beyond the classroom into research and mentorship. In Botswana, I collaborate closely with San trackers, whose expertise in fieldcraft is central to my research and who are recognized as co-authors on publications. My Botswanan research assistant, Trevor Balone, has presented at national symposia, earned professional certifications, and gained acceptance into the University of Oxford's postgraduate diploma program under my mentorship. Similarly, as an official mentor in the ARTEMIS program, I hosted Uakendia Muzuma at the Max Planck Institute in 2024 and continue to mentor him as he pursues a PhD in Namibia. In 2025, I will be hosting a South African MSc student. These experiences illustrate how I use research collaborations to create pipelines for historically underrepresented groups in science. At Deep Springs, where students combine rigorous academics with labor and self-governance, I see an extraordinary opportunity to model inclusion and mentorship not only in scientific contexts but also in the daily practices of community life, preparing students to carry these values into their own futures of service and leadership.