Throughout my academic career in neuroscience, my objective as an educator has been to challenge my students to confront the most fundamental questions in science and to problem solve collaboratively. I have 8 years of experience teaching undergraduates, 6 years of experience teaching graduate students, and in 2013 created and taught and award-winning course on neuroscience at Tufts University as a visiting lecturer. Moreover, between 2012-2016, I delivered over 100 public lectures to high school students, universities, and popular media forums, which collectively have honed my skills as an effective communicator of science that I am eager to apply at Boston University.

In terms of teaching style, my approach is to deliver carefully composed, Socratic-style lectures that encourage students to be active participants, and not passive listeners, in the classroom. More specifically, my typical interchange with a classroom of students across a semester consists of three stages: deconstruction, reconstruction, and exploration. The first stage is to deconstruct a seemingly ephemeral biological phenomenon into tractable and measurable parts. This occurs by beginning with a biological example in which a complex behavior, such as memory, is deconstructed into its putative cellular components. In this portion of the semester, my students learn both about the *process* of experimental science that lead to particular discoveries—which are supplemented with primary literature readings—while also actively engaging the material I present through constant dialogues with each student. This includes group projects and presentations, essays, and in-class problem sets with a partner. The goal in this stage of learning is to challenge students to comfortably confront ignorance and to eventually admit, “I don’t know.”

During the next stage of reconstruction, students are in a knowledgeable position to assemble what they’ve learned and to propose means by which an unknown in neurobiology can yield to the experimental method. In this part of the semester, we continue to review primary literature and additionally discuss in teams how researchers went about compiling what was previously known in the field and suggesting hypothesis-driven experiments. Why were the experiments performed this way? What are the shortcomings of each method or interpretation? Given what we’ve learned, how would you modify an experiment or what alternative controls could be performed? This kind of active problem solving, I believe, encourages both undergraduates and graduate students to integrate and apply their previously acquired knowledge sets in the classroom in the service of actively problem solving a given set of experimental questions at hand.

Finally, the third stage of exploration consists of team-based projects in which students propose original concepts and experiments. I maintain that exploration is the stage in which students are most enthusiastic about reaching the cutting-edge, because they are now equipped with nearly a semester’s worth of knowledge to ask scientific questions and propose an experiment for testing a given hypothesis. For undergraduates, these exercises serve as pedagogical vehicles for conveying and appreciating the immense complexity of neurobiology; for graduate students, these exercises provide useful opportunities to refine their skills in experimental design and hypothesis testing.

Having attended BU between 2006-2010, I am well acquainted with its classroom structures ranging between introductory courses for freshman to advanced specialized courses for graduate students—I am thrilled by the prospect of applying my skillsets in education to teach its vibrant undergraduate and graduate community. Fittingly, my numerous experiences in teaching both lower- and upper-level undergraduates has provided me with the comfort and leadership necessary to successfully organize courses ranging from introductory level neurobiology, intermediate level cellular and systems neuroscience, to advanced courses in learning and memory. For instance, at BU, for 3 years I was a teaching assistant for introductory biology, systems physiology, and upper-level lab courses. At MIT, I taught graduate students for 3 years in systems neuroscience, learning and memory, and physiology—for each year I am grateful to have received the highest teaching awards MIT offers to teaching assistants. At Harvard, I currently lead workshops for graduate students and postdoctoral fellows seeking careers both in and out of Academia. Thus, for BU’s graduate students, and with my expertise in cellular and behavioral neuroscience, I plan to create and teach general systems neuroscience courses, specialized courses on modern techniques used to observe and perturb circuits in the brain, modern approaches to studying learning and memory, as well as hold workshops for undergraduates, graduate students, postdoctoral fellows seeking careers in science. I will teach these seminars by meandering between primary literature, student presentations, ongoing dialogues between the students and myself, and I will also plan for guest lectures from leaders in the field. My workshops will be open to the larger BU community and the goal is to provide a candid account of the trajectories available to students perusing STEM careers.

Moreover, inherent to my teaching approach is an appreciation for the didactic power of student culture. For instance, last year as a visiting lecturer at Tufts University, my course covered cellular and behavioral neuroscience as well as its role in Hollywood. The purpose of the course was to utilize science fiction as an instructive method through which to tour the fundamental principles of neuroscience. The course filled up within minutes of registration, went on to receive numerous accolades, and I was invited back to teach it indefinitely. More importantly, the most common feedback I received from the course was that not only did students learn the vastly detailed themes of contemporary neurobiology, they also *retained* the information and often left class excited to share the information with their peers—the latter was a personal metric of successfully imparting science onto my students. Such experiences have only cemented my enthusiasm for teaching the complex topics of neurobiology in an intelligible manner and without distilling the information. To me, teaching is storytelling at its finest, capable of imparting biological truths to any audience.

Finally, I have learned personally that the only way to become a more effective communicator of science is to take students’ feedback earnestly. To that end, after every month, I have students write a list of three things they would change about the class and I fully acknowledge these comments when structuring future lectures. Teaching requires a sort of dynamism and flexibility to best fit a student’s learning style in real-time. As such, I happily meet with students individually both during office hours and by appointment to assist in preparing them for their presentations, to explain any topic that may be the source of confusion, or simply to follow up class material with curiosity-driven questions. Thus, with my years of teaching experience at Boston University, MIT, Tufts, and Harvard, I am confident that I have the necessary skillsets to embrace the teaching opportunities available in the Department of Psychological & Brain Sciences.