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Teaching Statement

Growing up with a mother who was an elementary school teacher, I witnessed the profound impact educators can have on individuals. During my master's in mathematics at the State University of New York (SUNY) at Potsdam, insights into teaching through tutoring undergraduates. However, it was during my PhD at the University of Connecticut (UConn) that I developed a genuine passion for teaching. My first real experience teaching was as a teaching assistant (TA) for introductory statistics courses, Introduction to Statistics (STAT1000) and Elementary Concepts of Statistics (STAT1100). Since then, I have been the primary instructor of those courses and Introduction to Mathematical Statistics II (STAT3445) for upper-level undergraduate students. Additionally, I have tutored undergraduate mathematics and statistics courses as part of the Student Athlete Success Program (SASP) at UConn. My teaching philosophy centers on facilitating critical thinking, instilling motivation, and encouraging precise repetition of concepts and examples.

Facilitating critical thinking. As an educator, I aim to equip students with tools for future success beyond their current courses. The ability to think critically is key to approaching diverse problems with confidence and broadening their learning horizons. To achieve this, I create an interactive learning environment where students feel at ease asking and answering open-ended questions, expressing opinions, and engaging in collaborative learning. Through intentionally designed lessons, hands-on exercises, and group work, students gain tangible insights into core concepts. This approach encourages independent investigation, evidence-based conclusions, and diverse perspectives. By promoting active participation, I cultivate a culture of critical thinking and exchanging of diverse perspectives. This empowers students to analyze situations, identify key issues, and propose solutions while assessing their understanding and identifying areas for improvement.

Instilling motivation. To maximize my students' potential, I put a lot of focus on cultivating a sense of ambition. It starts by clearly communicating the learning objectives and goals to provide the students with a sense of purpose and direction. Throughout a semester, I develop a sense of teamwork and encourage collaboration among students by assigning group work and allowing them to work through problems together. Fostering an interactive learning environment that is positive, supportive, and inclusive not only facilitates critical thinking, but it also encourages students to engage and inspires them to participate. As a way of making the course material relevant, I connect classroom lessons to real-world scenarios which the audience can relate to. Different students may gravitate to different examples, so it is important to provide explanations in a variety of ways. This was particularly crucial as the PI of STAT1000 in a lecture of 285 students and as the TA of multiple introductory statistics courses in the same semester. By mapping concepts to tangible situations, students can look past the wording, or symbols, and grasp the underlying concepts of a mathematical/statistical problem. Additionally, it opens their eyes to the wide variety of practical applications utilizing mathematical sciences. This was particularly valuable for the upper-level undergraduate students in STAT3445 as they were

preparing for graduation soon. I also use a variety of teaching methods to cater to different learning styles, which I became good at through one-on-one tutoring sessions. Lastly, I set high, but achievable, expectations, while offering positive constructive feedback and celebrating any accomplishments to boost the students' confidence and motivate them to excel further.

Encouraging precise repetition of concepts and examples. Building on instilling motivation and a desire to learn, I encourage students to partake in precise repetition of concepts and examples as a way of gaining a deeper understanding of course material. Given the constraints of class time, it's essential for students to invest extra effort outside the classroom, reviewing concepts and practicing diverse examples. This practice not only equips them with a broader set of problem-solving tools but also enhances their problem-solving intuition. More specifically, it allows them to approach problems they may not have seen before with confidence. To urge students to practice on their own time, I create multiple practice problems and hand-written solutions which are available on the course website throughout the semester. Regular availability for meetings outside lectures emphasizes my commitment to supporting their efforts. I consistently affirm each student's capability, regardless of their mathematical/statistical background, emphasizing that knowledge is built through consistent exposure. I draw parallels to talented athletes and musicians who achieve mastery through dedicated practice outside formal training, stressing the importance of reviewing material independently to master concepts and problem-solving skills.

The effectiveness of integrating the elements of facilitating critical thinking, instilling motivation, and encouraging precise repetition has been shown through the feedback I have received from students and their observable growth. On top of favorable teacher evaluations, I've been entrusted with writing recommendation letters and personally thanked for aiding students in their higher education journey. For me, the most rewarding aspect of being an educator lies in the constant learning environment it provides. I look forward to further evolving as a teacher, benefiting from the insights of talented colleagues, and embracing opportunities to instruct different courses.