Teaching Statement

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My primary motivation as an educator is inspired by the exceptional professors and instructors I had during my own studies as student. The clear explanations of those professors, their thoughtful guidance, and engaging teaching methods greatly enriched my learning experience. In my own teaching, I strive to offer the same level of clarity and enthusiasm, providing rigorous and logically structured explanations. My goal is to clearly differentiate between assumptions and logical deductions, ensuring that students grasp both the foundational concepts and the subtleties of the subject matter.

In today's fast-paced, information-rich academic environment, where instant access to vast amounts of information is readily available through the internet and communication is accelerated by email and digital tools, I place great emphasis on making the purpose and relevance of each curriculum topic explicit. With knowledge just a click away and the speed of academic exchange faster than ever, it is crucial to guide students in navigating this wealth of information by focusing on core concepts and their real-world applications. For instance, in my *Math 313/513* course at the University of Pennsylvania, I designed the curriculum to furnish students with crucial linear algebra skills, with particular relevance to fields such as data science and computer science. To enhance engagement, I integrated `Python` programming exercises to illustrate real-world applications, thereby ensuring that the students understand how to apply the theory in practice.

Effective assessment is a key element of my teaching approach. In *Math 313/513*, I employed a combination of weekly assignments, midterms, and a final exam to evaluate student progress. Clear grading criteria were established, and I worked closely with graders to provide consistent, constructive feedback. I focus on awarding points for correct solutions, as I believe that encouraging correct answers is more effective than penalizing mistakes.

To ensure sustained student engagement, I carefully structure my lectures. In each lecture, I begin with a brief review of previous material and outline the objectives for the day. I also incorporate short, intentional breaks during lectures to allow students time to absorb information, reflect on concepts, and ask questions. This structure promotes active participation and helps maintain focus throughout the lecture.

I believe that comprehensive teaching materials are essential for creating a common reference point among students, instructors, and graders. In *Math 313/513*, I developed detailed lecture notes, provided solutions to weekly assignments, and made lecture recordings available to the students. These resources serve to reinforce the material and ensure that students have continuous access to essential information.

Discovery-based learning is another cornerstone of my teaching methodology. I encourage students to explore and uncover mathematical concepts through hands-on exercises. For example, in *Math 313/513*, I designed exercises in which students explored the properties of Markov matrices using `Python`. This approach not only enhanced their computational skills but also deepened their conceptual understanding.

Gathering feedback early in the semester is essential for identifying and addressing potential challenges before they hinder student progress. To achieve this, I utilize mid-semester surveys and quizzes to assess student satisfaction and pinpoint areas in need of adjustment. Additionally, I maintain an open-door policy with flexible office hours, providing individualized support for students facing difficulties. This approach proved especially valuable during the COVID-19 pandemic, when students encountered heightened stress and uncertainty.

I am committed to fostering an inclusive and supportive learning environment. During my time at the University of Pennsylvania, I worked with several students with physical disabilities. In collaboration with the Weingarten Learning Resources Center, I ensured that these students received the appropriate accommodations, such as extended time for exams and quiet testing environments. I consider it essential to actively inform students about the resources available to them and to create an environment where they feel empowered to succeed, regardless of any challenges they may face.

It is my firm believe that diversity enriches the learning experience, and I am dedicated to supporting all students, regardless of their background or personal circumstances. In my classroom, I actively embrace inclusivity and am committed to providing equal opportunities for everyone. Discrimination has no place in my teaching; my goal is to create an environment where every student feels respected, supported, and encouraged to achieve their full potential in an inclusive academic setting.