

Teaching Statement

Teaching is an important part of being a professor at every university. I truly enjoy teaching, and I have consistently received positive teaching evaluations from my students. Being an applied mathematician automatically leads me to be interdisciplinary, and I carry this over into my teaching by using an integrated approach. I strive to lead students beyond just learning facts to being able to synthesize ideas. Using mathematical models helps students understand how the math they are learning could be used in real world applications.

Courses should be constructed so that students are challenged to understand why the material they are learning is useful. I want the students to do more than just memorize equations and facts. To this end, I utilize group projects, hands-on learning and extensive use of computers rather than just lectures and homework assignments. Thoughtfully designed labs and projects can complement a course and plant the seeds of applications. For example, I assign homework projects that require the students to design and perform a simple experiment to test a biological or mathematical principle taught in the class. I want to teach students how to think critically and how to apply what they learn to new situations. Computer skills are essential to computational and applied mathematics. My background includes experience writing C++ code as well as using mathematics software packages. Many projects I assign include the use of computers.

My teaching experience includes a variety of mathematics. During graduate school, I taught two semesters of calculus for life sciences majors. In creating lectures and projects for this class, I helped to develop the curriculum that has become the standard for quantitative life science education according to the National Academies. In addition, I taught a basic level Algebraic Reasoning class as well as assisting with recitations for College Algebra and Business Calculus. I look forward to teaching graduate level courses particularly a mathematical biology course. I would enjoy developing other interdisciplinary courses such as mathematical modeling and mathematical epidemiology and also developing seminars on current topics in applied mathematics.

Mentoring students is another personal goal. By being in a mathematics department, my students would benefit from the wide variety of areas of expertise in this department. Applied mathematical biology is a broad field of study, and I would encourage students to find a specific project in which they are interested. It is very important to teach students how to think independently rather than just helping them to get through the system.