

Learning mathematics is beneficial to every student - regardless of major, gender, race, or ethnicity - imparting life skills beyond the initial practical applications. I believe mathematics develops logic and problem-solving skills, increases intellect, and builds confidence. These skills are real assets that every student needs to become a future leader in their respective fields. Since mathematical success is so beneficial, I strive to encourage every student to succeed in my classroom and to challenge each student's critical thinking abilities and logic facilities.

I believe learning mathematics is inseparable from doing mathematics. By working through problems, students obtain more than just the correct answer. They obtain the skills necessary to approach problems in a logical manner and discover their own solution, which ensures the depth and beauty of mathematics is fully comprehended and integrated into students' minds. I believe students benefit from exposure to mathematical concepts and ideas in a variety of contexts, providing different avenues for doing mathematics. Additionally, I believe teaching is always a work in progress, adapting as necessary to accommodate new students, new ideas, and new technology. I am very interested in learning new techniques and methods that other faculty members have successfully implemented.

Crucial to my teaching effectiveness are organized, relevant, example-driven, and student-involved *lectures*, including judicious use of technology and visual aids. An effective way I involve students is to have a weekly *group problem session*, which I have used in several of my previous courses. I normally choose problems from assigned homework and have the students either write up the solutions for grading or present the solutions on the board for the entire class. Former students said they enjoyed learning from each other and discussing their solutions, as well as being able to interact with me on an individual basis and obtain answers to their questions.

Outside the classroom, I have designed *reading assignments* to develop students' abilities to read and understand mathematics textbooks, assigned *homework problems* through the textbook or a web-based medium to reinforce and challenge students' mastery of concepts on an individual basis, implemented department-made *Maple assignments* to illustrate key concepts in Calculus, and designed and implemented *group and individual projects* to connect the students to real-world applications and to reinforce written and oral communication of mathematics. Currently, I am working with an NCSU professor to design a project-driven module on resultants for an applied abstract algebra course. I believe projects enable students to fully explore mathematical ideas, and I plan on continuing to create projects for my future classes.

As a teacher, I am committed to being available during posted office hours, to schedule appointments with students unable to make office hours, and to promptly respond to messages via voicemail or email. These actions are crucial to obtaining an environment in which students are enabled, motivated, encouraged, and challenged to succeed.

Additionally, I am committed to advising and mentoring mathematics majors, as well as including undergraduates in research. I have served for two separate summers as a graduate student mentor to the undergraduates involved in my thesis advisor's REU program. It is exciting to see students involved in research and to guide them to their own new results. I look forward to developing my own undergraduate research projects and working with students on new mathematical ideas.