Teaching Statement

To teach effectively, one must understand, motivate, and challenge students. Through formal interactions in the classroom and informal discussions in the office, I aspire to inspire students to explore a variety of mathematical concepts and applications.

In my courses, I want students to grow mathematically, academically, and socially in an atmosphere that is both stimulating and adaptive to their diverse needs. I find that encouraging students in the classroom to contribute to discussions and to present homework solutions have been pivotal in increasing student involvement and enthusiasm. Throughout the lecture, I incorporate just enough humor to make the experience enjoyable and productive. With this style of teaching, students take an active role in their learning in a relaxed environment, while I curtail my role to that of mathematical guide and motivator. I believe that students learn not only by what is shown to them, but by what they accomplish.

In many of the courses that I have taught, I assigned writing assignments. Each group would type a report which includes answers to preassigned questions. Since this would be the first time students would write a scientific paper, I would encourage the students to come to me for assistance with revisions. I also encouraged students to utilize the writing center on campus. By working in groups, students would learn how to talk about mathematics in a technical sense, and then organize the information into a technical paper. Writing can be a powerful tool to reinforce concepts.

As a result of my research in applied mathematics, I have been able to expose undergraduates to mathematical research. For example, I enhanced students’ understanding of calculus through projects that applied the subject to fundamental topics in the sciences. Over the years, I have created a number of topics courses in the areas of mathematical biology and scientific computing which exposed undergraduates to current trends in the field. Topics include utilizing mathematics to describe oscillations made by the Tacoma Narrows Bridge on the days of its collapse, the spread of infectious diseases, and systems in synthetic biology. As a result, the students find that the material “comes alive;” they can see interesting ways that mathematics describes the world around them. I look forward to developing more research-based courses so that students can both understand the applicability the mathematics and learn to appreciate the beauty of the subject.

I am accessible to students by holding weekly office hours plus appointments, conducting evening and weekend review sessions, and posting teaching materials online via Blackboard. Students frequent my office for consultation on scheduling, balancing personal interests with educational responsibilities, and ways to attain academic success. Often, students will visit just to chat as they can be quite anxious about their life’s trajectory. I am sympathetic to students’ needs and help them seek positive solutions especially in the midst of personal and academic turmoil. I ultimately assist students as they define their path in life while encouraging them not to give up on their dreams.

I believe it takes more than a single individual to make a difference in the lives of students. Therefore, I have learned the value of being a team player and the importance of communicating with colleagues, students, and administrators so that I will be able to provide the best education possible for my students. I take great pride in being a teacher and a motivator, and feel my strengths and talents are well utilized in this stimulating career. As I grow as an instructor and mentor, I hope to continue to convey my enthusiasm for acquiring knowledge and give students tools that will help them grow as learners.
Courses Taught Since Fall of 2001

Duke University, Durham, North Carolina, USA.

Spring 2002
MATH 31* Laboratory Calculus I

Fall 2002
MATH 31L Laboratory Calculus I
MATH 131 Elementary Differential Equations

The College of New Rochelle, New Rochelle, New York, USA.

Fall 2003
MTH 109 Quantitative Reasoning
MTH 111 College Mathematics
MTH 116 Precalculus/Elementary Functions
MTH 121 Calculus I

Spring 2004
MTH 117 Elementary Statistics
MTH 122 Calculus II
MTH 214 Differential Equations
MTH 330 Numerical Analysis

Fall 2004
MTH 100* Intermediate Algebra
MTH 121 Calculus I
MTH 390 Seminar in Mathematics: Geometry

Spring 2005
MTH 121 Calculus I
MTH 122 Calculus II
MTH 256 Discrete Mathematics

University of Evansville, Evansville, Indiana, USA.

Fall 2005
MATH 105* College Algebra
MATH 211 Calculus I with Precalculus Review

Spring 2006
MATH 222 Calculus II
MATH 324* Differential Equations

Fall 2006
MATH 323* Calculus III
MATH 495 Senior Seminar: Mathematical Modeling
CE 499 Topics Course on Modeling the Tacoma Narrows Bridge

*Two sections taught
Spring 2007
MATH 324* Differential Equations
MATH 373 Numerical Methods

Fall 2007
MATH 134* Survey of Calculus
MATH 495 Senior Seminar: Mathematical Modeling

Spring 2008
MATH 202 Mathematics for Elementary Teachers
MATH 222* Calculus II
MATH 373 Numerical Methods (Independent Study)
DISC 300 African American Experience: Law and Society

Summer 2008
MATH 324 Differential Equations

Fall 2008
MATH 211 Calculus I with Precalculus Review
MATH 495 Senior Seminar: Mathematical Modeling

Spring 2009
MATH 222* Calculus II
MATH 373 Numerical Methods

Summer 2009
MATH 134 Brief Calculus

Fall 2009
MATH 101* Mathematical Ideas
MATH 355 Foundations of Geometry

Spring 2010
MATH 202 Mathematics for Elementary Teachers
MATH 222* Calculus II
MATH 490 Independent Study on Applied Differential Equations

Summer 2010
MATH 324 Differential Equations

Fall 2010
MATH 101 Mathematical Ideas
MATH 191 Mathematical Modeling in Synthetic Biology
MATH 222* Calculus II

Spring 2011
MATH 101* Mathematical Ideas
MATH 373 Numerical Methods

*Two sections taught
Howard University, Washington, District of Columbia, USA.

Fall 2011
FRSM 001  Freshman Seminar Group Project Advisor
MATH 157  Calculus II
MATH 164  Numerical Analysis

Spring 2012
MATH 156  Calculus I
MATH 192/450  Topics in Applied Mathematics: Mathematical Biology

Fall 2012
FRSM 001  Freshman Seminar Group Project Advisor
MATH 006  College Algebra I
MATH 159  Differential Equations
MATH 089  Directed Readings in Honors for Juniors: Modeling Calcium Homeostasis

Spring 2013
MATH 156  Calculus I
MATH 192/450  Topics in Applied Mathematics: Mathematical Biology
MATH 166  Directed Readings: Discrete Programming in MATLAB and Proof Writing
MATH 166  Directed Readings: Stochastic Programming in Sage

Fall 2013
MATH 156  Calculus I
MATH 222  Real Analysis I

Spring 2014
MATH 021  Fundamental Concepts of Mathematics for Education II
MATH 223  Real Analysis II

Fall 2014
MATH 007  Honors Precalculus
MATH 020  Fundamental Concepts of Mathematics for Education I

Spring 2015
MATH 021  Fundamental Concepts of Mathematics for Education II
Math 450  Topics in Applied Mathematics: Scientific Computing (with MATLAB)

Fall 2015
MATH 020  Fundamental Concepts of Mathematics for Education I
Math 101  Proof and Problem Solving I
Math 247  Numerical Analysis I (of Differential Equations with MATLAB)

Spring 2016
MATH 006  College Algebra I
MATH 021  Fundamental Concepts of Mathematics for Education II
MATH 166/290  Directed Readings: Introduction to Data Science with R/Studio
Fall 2016
MATH 084/296\textsuperscript{G} Data Science with \texttt{R/RStudio} Seminar
MATH 020 Fundamental Concepts of Mathematics for Education I
Math 158 Calculus III

Spring 2017
MATH 007 Precalculus
MATH 021 Fundamental Concepts of Mathematics for Education II
MATH 247\textsuperscript{G} Numerical Analysis I (of Partial Differential Equations with \texttt{MATLAB})