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TEACHING STATEMENT

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1 INTRODUCTION

As outlined in my vitae, I have extensive and successful teaching experience. I have taught courses ranging from developmental to mid-level undergraduate Mathematics courses, first year Physics, Chemistry, and Engineering courses, a logic course (which I designed), and a math study skills course. In addition to these, I have also taught ACT prep and various continuing education courses (including two weeks at Ormet Corporation in Hannibal, Ohio). More recently, I taught part of a graduate course at Carnegie Mellon University and I will be teaching Abstract Algebra this spring and a graduate Algebraic Number Theory course this summer. As well, I have directed five undergraduate reading courses, namely Calculus I, History of Mathematics, Number Theory, Advanced Topics in Discrete Mathematics, and Galois Theory.

2 PHILOSOPHY

I believe that anyone that can put words together to communicate an idea has the ability to do some level of mathematics. I am optimistic possibly to a fault. Of course, doing mathematics requires a great level of effort; often times unpleasant. But only in doing mathematics is mathematics learned. Regrettably, many experience setbacks and lose confidence and thus fail to attempt the appropriate amount of problems they need to do to learn. As such, I feel it is critical that anyone who teaches mathematics play the dual role encouraging students to work in spite of the setbacks and as well the role demanding continued effort.

Additionally, I value the lessons that can be learned from my classes. In particular, hard work and persistence will eventually lead to success.

3 STUDENT EVALUATIONS

It is the case that almost every term I have taught my students' evaluations have been higher than the department's average. Of course, since I teach many first-year Mathematics courses, I do often have negative evaluations. But for each of these I have at least two equally positive evaluations. I encourage reading my students' evaluations of me at ratemyprofessor.com (there are evaluations of me from Pitt students and students at Rhodes College [in Memphis, TN] and the University of Memphis).

4 RELEVANT PERSONAL ATTRIBUTES

Former students have said that though I am demanding, I offer large amounts of encouragement and help. Most students also find me personable and enjoy the open environment of my classroom. It is because of these traits that many students have found me approachable.

Also, I make every effort to be a good communicator; both in the words I use and how I deliver them. I speak both loudly and clearly. These characteristics have maximized my students' learning experience.

5 STUDENT SUCCESSES

Recently I taught a Fall Calculus I class at Memphis. A particular freshman did very poorly (I assigned a D) but showed much potential; in particular, he asked very good questions. I assumed he was bored and had not yet been challenged in his mathematical career. As such, I invited him to take the Discrete Mathematics course that I taught in the Spring. He was the only freshman in a class of computer science majors and he significantly outperformed everyone else in the class. As well, he did an independent study with me that summer where we continued on in the Discrete text (Rosen): looking at generating functions, etc. For his final exam, he gave a presentation on the Stirling Numbers to a panel of faculty. He is now a Mathematics major and one of Memphis' brightest undergraduates.

My last year at Memphis a senior studied Number Theory as a reading course with me. For his final, he presented a proof of the Law of Quadratic Reciprocity (one different from the text we used). He is now a graduate student.

A student of mine at the two-year technical college did independent studies with me in Calculus and the History of Mathematics. He went on to a four-year school, became a Mathematics major, and went to graduate school.

Although I have not yet directed student research, the above show that I have successfully directed student independent learning.

6 EXPERIENCE

–UNIVERSITY OF PITTSBURGH	
Abstract Algebra (senior level)	1 section
Introduction to Theoretical Mathematics	1 section
Calculus III	3 large sections
Calculus II	3 large sections
Calculus I	4 large sections
–Includes supervising recitation TAs and graders.	
–CARNEGIE MELLON UNIVERSITY	
Mathematical Models for Consultants	a Tepper Business course (taught twice)
Additive Combinatorics	taught part of this graduate course
–DUQUESNE UNIVERSITY	
Calculus I	1 section
–UNIVERSITY OF MEMPHIS	

Foundations of Mathematics	1 large section
Mathematical Experiences	1 section
Elementary Calculus	2 sections
College Algebra & Trigonometry	1 large section
Calculus I	2 sections
Honors Calculus I	1 section
Calculus II	2 sections
Discrete Structures	3 sections
Introduction to Proofs/Fundamentals of Mathematics	2 sections
<i>reading course: Number Theory</i> ¹	1 section
<i>reading course: Adv. Topics in Discrete Mathematics</i> ²	1 section
<i>reading course: Galois Theory</i>	1 section

¹ For the final exam, the student presented a proof of the Law of Quadratic Reciprocity.

² For the final exam, the student [a freshman] gave a presentation of the Stirling Numbers of the First and Second Kinds to a panel of faculty.

Additionally, at Memphis, I have assisted in teaching special sections of Elementary Calculus and Honors Calculus II. I have also taught 2 continuing education courses on ACT prep.

–RHODES COLLEGE, MEMPHIS, TN

Fall 2004

Spring 2005

Applied Calculus

Calculus II

–UNIVERSITY OF TENNESSEE-KNOXVILLE

Finite Math

Precalculus

Business Calculus

Calculus II

2 sections

7 sections (including 1 large section)

recitation

recitation

–MIAMI UNIVERSITY, OXFORD, OHIO

Precalculus

Calculus I

1 section

3 sections

–BELMONT TECHNICAL COLLEGE [QUARTERS SYSTEM]

Intro to College Math I	4 sections
Intro to College Math II	2 sections
Prealgebra	15 sections
Elementary Algebra I	16 sections
Elementary Algebra II	12 sections
Math Study Skills	1 section
College Business Math	1 section
Allied Health Math	1 section
Tech Math I	1 section
Engineering Math I	1 section
Precalculus	4 sections
Physics I	2 sections
Physics II	1 section
Engineering Chemistry	1 section
Intro to Polymer Chemistry	1 section
Engineering Mechanics I	1 section
<i>reading course:</i> Calculus I	1 section
<i>reading course:</i> History of Mathematics	1 section
<i>designed and taught:</i> Intro to Logic	1 section

Additionally I taught at least 4 continuing education courses on site.

7 BEYOND THE CLASSROOM

While at Memphis I was very involved with the undergraduate mathematics club - the Cantor Sect. In addition to giving a talk and recruiting a speaker, I attended most meetings and interacted with the students. I also strongly encouraged the students in my classes to participate in the club. In addition to learning some mathematics and seeing a bit of the culture, I think the environment gave students a chance to feel like a part of the department. I am certain that at the times students were discouraged with their mathematical career, the club offered the support that the students needed.

Note that if you navigate the Cantor Sect's website (<http://dpdsdogs.com/dpd/math/cantor/default.htm>) there are pictures of me giving a recent talk while caring for my infant daughter.

I do hope to be involved with the mathematics club here at the University of Pittsburgh. In fact, I will be speaking to the club in January. I have also involved an undergraduate in a research project that a colleague and I are working on.