A STATEMENT OF TEACHING EXPERIENCE AND PHILOSOPHY.

(A copy of a detailed teaching portfolio is available on request.)

EXPERIENCE

During my five years as a graduate student at the University of Delaware, I had the opportunity to teach a variety of courses as an independent instructor. I also assisted faculty as a TA. This has provided me with invaluable experience, and helped me evolve my personal teaching ethic.

• Autonomous Instruction
  As an autonomous instructor, I was responsible for developing and delivering lectures, and for designing appropriate homework, labs, and examinations. The courses I have taught independently are listed below:

• Teaching Assistant
  As a teaching assistant, I was responsible for conducting weekly recitation sections, as well as developing and grading quizzes. The courses I have assisted in are listed below:
  – *First Semester Calculus and Analytic Geometry* - Fall 1998.

• Teaching Awards and Honours
  – *Nominee, Excellence in Teaching Award, University of Delaware, 1998*: This university-wide teaching award is based on anonymous student recommendations.
  – *Baxter-Sloyer Award, University of Delaware, 1997*: This is awarded for excellence as a graduate teaching assistant in the Mathematical Sciences.

• Student Evaluations
  Student evaluations and feedback are invaluable tools for refining and improving oneself as a teacher. During the semester, students had an opportunity to anonymously assess my effectiveness as a teacher. This mid-term evaluation was voluntary, and was not required by the Department. I administered it since students seemed to respond positively when they saw changes they recommended being implemented. However, I did not compromise on either the standards or the content of the course.
  A few of my end-of-term evaluations have been compiled here for reference. In all of the evaluations, the possible scores are 1-5, **1=always** and **5=never**.

<table>
<thead>
<tr>
<th>Item</th>
<th>Calculus I</th>
<th>Calculus II</th>
<th>College Algebra</th>
<th>Business Calculus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term</td>
<td>98S</td>
<td>98J</td>
<td>98W 97J</td>
<td>96S 95J 95S</td>
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<tr>
<td>Prepared</td>
<td>1.15</td>
<td>1.14</td>
<td>1.00 1.00</td>
<td>1.16 1.00 1.1</td>
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<td>Organised</td>
<td>1.5</td>
<td>1.29</td>
<td>1.17 1.22</td>
<td>1.20 1.00 1.29</td>
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<td>Open to Questions</td>
<td>1.2</td>
<td>1.29</td>
<td>1.00 1.20</td>
<td>1.28 1.08 1.19</td>
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<tr>
<td>Answers Questions</td>
<td>1.25</td>
<td>1.50</td>
<td>1.22 1.11</td>
<td>1.36 1.23 1.39</td>
</tr>
<tr>
<td>effectively</td>
<td></td>
<td></td>
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</tbody>
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A copy of all evaluation scores received, as well as actual evaluations, are available upon request.
TEACHING PHILOSOPHY

• Responsibility
As a teacher in the mathematical sciences, I believe my responsibilities include delivering clear, expository lectures, which present the material effectively without compromising on the content. I also aim to provide comprehensive lecture notes, which are used as supplements to the main text. I seek to set high academic and intellectual standards for my students, and adhere to them myself.

• Applications of Mathematics
In my teaching, I endeavour to present examples relating to applications in a variety of subject areas, as opposed to routine problems. This helps to motivate the need for mathematics, and also trains students in the art of using abstract concepts to understand concrete situations. In addition, I create and assign interdisciplinary term projects. These are drawn from areas ranging from civil engineering to biology to physics to economics. The students work in groups, and are required to apply mathematical concepts learned to solve these problems. As an additional benefit, I have noticed that this fosters group activity, without interfering with the day-to-day instruction of the class. A sample project is available on request.

• Technology in the Classroom
The use of technology has become increasingly popular in the classroom, and is especially helpful in the instruction of mathematics. I believe it is an indispensable tool, helpful in taking the tedium out of many calculations. Technology cannot, however, be a substitute for actual knowledge. A computer is truly only as effective and knowledgeable as the person on the keyboard. As a teacher of mathematics, my goal is to equip the person sitting in front of the screen with enough mathematical insight, so as to effectively exploit the machine.

– MAPLE labs: I design and use MAPLE labs while instructing Calculus (II), and have also been involved in creating applets for demonstrating mathematical concepts. My aim while designing these labs is to encourage analytical thinking before the student uses the technology. A sample lab is available on request.
– The Internet: My syllabi, homework assignments, and other resources are posted on my Web page each semester. I would like to exploit the Web more as an instructional tool in the future.

• Personal Interaction
I have observed that students learn better when they are held accountable for their academic actions, and when the interest of the instructor in their development is clearly apparent. To this end, I encourage questions in class, but try to lead the students to the answer, instead of answering it straight away. Students are also encouraged to make full use of office hours, and are assured an interested, attentive interaction. They are responsible for attending lectures, and maintaining the quality of their homework; a timely conversation outside the classroom is quite effective in this regard.