TEACHING STATEMENT
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For me teaching is a very important matter. My mother is a teacher back in Mexico, where her students are college level people who intend to become primary education teachers. Her philosophy and our surroundings allowed me to form a social conscience about the importance of receiving a quality education, and the responsibility of providing it. I also believe that preparing a course to teach gives us the impulse of understanding a subject better, and being responsible for thinking about new approaches to a subject familiar to us gives way to finding novel approaches to areas we are less proficient in, aiding our research.

Teaching experience in College
I went to college in Mexico City, and studied Mathematics in the national public university. When I was teaching, I had classes varying form 90 to 120 students, two years younger than me, and majoring in physics, computer science, actuary and mathematics. It was an enriching experience because I was teaching mandatory courses for people in their first year, and the groups were very heterogeneous. My university had students from very different socio–economical backgrounds, and varying levels of proficiency in mathematics. The courses I taught – Algebra, Linear Algebra and Analytic Geometry – were very theoretical. It is in these courses that most of the students are introduced to mathematical proofs, which require a shift in our paradigm of truth. They require logic and abstraction. I developed a good rapport in class, and even though no written evaluations were conducted, the attendance in my classes remained strong until the end of the semester.

Another teaching experience I had in college was as a volunteer in a literacy problem for adults living in poor rural areas. The program consisted in helping people with various degrees of illiteracy to learn to read and write, and to perform basic mathematical computations. I spent six weeks living in a small rural town, that embodied all the problems Mexico’s rural towns are riddled with, surrounded by very welcoming people and very hard working and devoted coworkers. Needless to say, it was an enriching experience that helped me appreciate even more the privilege of having access to a quality education. A particular challenge and lesson was to realize that sometimes, as teachers, we assume the students will deem our subject interesting as useful, when the truth is, sometimes one has to actually find a good reason for this person to want to go through the trouble of learning something they have not had the need or opportunity to learn about so far.

Teaching experience in Graduate School
I have taught as much as I have been allowed to in graduate school. I am currently a teacher assistant for Calculus I for the sixth semester, teaching two different recitations each semester. I was also the instructor for this course in an accelerated summer program offered by NYU, in the summer of 2010. Calculus I is the math class that most NYU students take. It has a very comprehensive syllabus, with topics ranging from the definition of a function until the Fundamental Theorem of Calculus. Students taking this class are often freshmen, and even though a portion of these students wish to major in mathematics or a related field, most of them are pre med students or want to major in economics or business. Most of the students are driven and hard working, and even though most of them won’t major in mathematics, I find it an essential class to teach because it is in this class that students develop analytical skills and lay a strong logical foundation that will aid them in constructing new knowledge in a logical way, as well as structuring arguments and ideas in a more robust fashion.

http://www.cims.nyu.edu/~salasboni/teaching
Calculus I - Teacher assistant

As a Calculus I teacher assistant, it is my duty to give weekly recitations to groups of about third students, where the material seen during the week in the lectures is to be revised. I structure my recitations as follows: I give a quick list of the topics covered that week in class, and, as we move forward through the material, I give them the definitions they need, a geometric interpretation, and several examples. I always start with easy examples, and modify them so as to increase their difficulty, having the students provide the answers. I also list some problems and allow the students a few minutes to solve them, either by themselves or in small groups. During this time, I walk around the classroom and go to the different small groups to see if anyone has questions. Then, I ask the students to come and write the answers in the board. I do this as to demystify the exercises, and also, being their first year, many of them feel like they are underperforming, and it is reassuring for them to realize that they for a very homogeneous, good group. Most of my students go to the board at least once during the semester, and it is a pretty relaxed environment. I also had to write up and apply some quizzes, grade them, and help grade the midterm and final exams. As an undergraduate student, I really appreciated when graded quizzes and exams were given to me in a timely fashion, so I am very responsible in meeting my teaching related deadlines. I have enough experience to assess the overall understanding of a subject of the group, so I can adjust the speed and level of complexity in my class. I am very energetic, well prepared in the subject, and build a good rapport with the students. The reviews from my students can be found in my webpage (http:www.cims.nyu.edu/~salasboni/teaching).

Calculus I - Instructor

I was the instructor for a Calculus I summer class. In this accelerated format, the material is covered in six weeks. The students attending the class often are either high school students, or students from other universities, yielding a more heterogeneous group. Given the fast pace of the course, I decided on writing daily worksheets for the students, so they could have easy access to what would be covered every section, as well as solved examples, and some exercises for them to work on in small groups in class. In this course I has required to design the homework and the exams, as well as reporting final evaluations.

Courses I would be interested in teaching

My research is interdisciplinary, hence I have dabbed in different areas of mathematics and computer science, with a focus on applications. In my experience, in order to develop intuition, running simulations in computers has been very illustrating. If I were to teach any of these courses, I would include some basic programming lessons (programs in 10 lines of code or less), so students can start getting familiarized with using computers as an aid for research. Here are some of the courses I could teach:

Calculus Precalculus, Calculus I, II and III, and Multivariate Calculus.

Probability and Statistics I could teach either a Basic Probability course, or an Elementary Statistics course. In Probability, I can have a theoretical approach or a more applied one.

Linear Algebra and Numerical Methods My research involves developing numerical methods, so I apply Linear Algebra on a daily basis. I believe it to be the backbone of applied mathematics. I can illustrate some of the real–life importance and applications of it.

Biostatistics This is a course I would be interested in teaching, because I would like to learn it in a more structured fashion. I would also like to learn what methods are applied in different areas of Biology or Medicine I am not familiar with.