

# Teaching experience

Norman Lewis Perlmutter

- **Visiting Assistant Professor**

Florida Atlantic University, main campus (Boca Raton), two semesters, 2013 – 2014

- Calculus 2 (two sections, Fall semester)
- Math for Liberal Arts 1 (two sections, anticipated for Spring semester)
- Seminar on Large Cardinals (year-long seminar)
- Substitute teacher for Calculus 3 (four class sessions)

For each section of Calculus 2, I am the instructor of record. Each section consists of approximately 35 students meeting twice per week, with each meeting lasting 110 minutes.

Topics covered in Calculus 2 include applications of integration, polar and parametric coordinates, convergence tests, and Taylor series.

The Seminar on Large Cardinals meets once or twice per week for about an hour. The usual audience is two graduate students and two faculty members.

The Math for Liberal Arts courses will consist of approximately 30 students per section. Each section will meet three times per week for 50 minutes each meeting.

Florida Atlantic University has one of the most diverse student bodies of all the public universities in Florida.

- **CUNY Writing Fellow**

New York City College of Technology (City Tech), two semesters, 2011 – 2012

In collaboration with other Writing Fellows, I designed and led workshops on writing-related topics for faculty and students. The workshop topics included evaluating and citing source material, writing abstracts, and marking student work efficiently and effectively.

I collaborated with a mathematics professor to design writing-intensive homework exercises for her class.

- **Graduate Teaching Fellow**

City College of New York, six semesters, 2008 – 2011

- Calculus 1 (three sections)
- Precalculus (one section)
- College Algebra (five sections)

I was the instructor of record for each section. Each section consisted of approximately 35 students meeting twice per week, with each meeting lasting 100 minutes.

City College, located in Harlem, has one of the most diverse student bodies of any college in the world.

Topics covered in Calculus 1 included limits, continuity, derivatives, applications of derivatives, integrals, and the fundamental theorem of calculus.

- **Tutor, grader, faculty teaching reviewer, and undergraduate researcher**

Grinnell College, 2005 – 2007

I tutored students in calculus and linear algebra, led group study sessions in real analysis, and graded homework for a combinatorics course.

I led intensive faculty teaching reviews used by the department for promotion decisions. For each review, we interviewed students about the quality of the professor's teaching, synthesized the results, and made a recommendation to the department.

I participated as an undergraduate student in a summer research program. This experience could help me to lead such a program as a professor in the future.

- **Private Tutor**

Intermittent times and various locations, since 2002

I have over 200 hours of experience tutoring diverse high school and college students in algebra, calculus, and discrete mathematics.

- **Math Camp Teaching Assistant**

Center for Talented Youth, Mount Holyoke College, three weeks, 2004

I taught logic to a class of twelve gifted fifth and sixth graders.

# Teaching philosophy

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## Experimenting with diverse teaching strategies

As a teacher, I am committed to helping my students to engage with the course material and to reach a deep and multifaceted understanding of mathematical topics. Towards these goals, I employ a variety of teaching strategies. Below are examples of some of the teaching strategies that I have used. In the future, I plan to continue exploring more teaching strategies.

## Encouraging student participation

During the present academic year, I have been especially focusing on soliciting student input effectively. When I work through an example, I try to get student input at each step along the way. I insert lengthy pauses into the lecture in order to encourage students to ask questions or give suggestions. I keep track of participation points in order to further encourage student input. I also award participation points for students who come to office hours.

If a student makes a suggestion for how to solve a problem, then I often write the student's suggestion on the board, even if it is vague or incorrect or not in line with what I was expecting. In this way, students are able to see mathematical reasoning in action, rather than a canned lecture.

In order to keep the class experience engaging, I maintain a strong physical presence. In particular, I remain standing during the entire class session, walk around the room when students are working at their desks, and make expressive gestures to emphasize key points in the lecture. In this way, I hope to appear more engaging and energetic to the students and to further encourage student participation. This effort to engage students has been paying off: one day after class, a student approached me and said, "I just wanted to thank you for making this class fun."

## Encouraging students to read and write

One of my goals is for my students to understand that mathematics is not only about computations; like most other academic subjects, mathematics involves a lot of reading and writing. One way that I work towards this goal is by assigning a substantial amount of writing to my students, even in lower-level classes.

Some of this writing occurs in the course of standard assignments. For instance, if calculus students are solving a related rates problem, I encourage them not only to show their computations but also to explain in complete sentences how the computations relate to each other and to the problem statement. In other cases, I assign more elaborate writing exercises. For instance, in one problem on a calculus 2 test, I asked students to write a few sentences explaining the steps that they would take to solve a complicated integral, rather than actually solving the integral.

I also assign brief, low-stakes writing exercises for students to complete in class, for instance, summarizing the ideas from a lecture or writing down intuitions on a topic prior to my explanation of it.

One way that I encourage students to read is by assigning simple homework problems on topics that have not yet been covered in class. (The vast majority of my homework problems reinforce topics already covered in class.) The purpose of these preview problems is to help students learn to read critically and to think independently. Students gain great confidence from being able to figure things out on their own. I believe that this sort of independent thinking is important for their success in school and in life.