

# Teaching Statement

When I am teaching my classes I am following the following principles:

- 1.) *Be your students' friend.* Especially in mathematics, many undergraduate students are afraid of failure, and ultimately of the subject itself. As a result, they may start to believe that mathematics is done solely to please the teacher, who is their "opponent". It is a delicate task to truly convince my students that my goal is to guide and accompany them on their way to success, despite the fact that I will still have to give each of them a fair grade that is based on their performance.
- 2.) *Make your students want to know the material.* Students can easily get the impression that mathematics is unlikely to be applicable in their daily lives or in their future jobs, especially in more advanced courses. As the teacher, I must know at what parts of the syllabus this danger may arise and how to motivate my students accordingly in advance. A semester project is a good way to keep students interested throughout the whole course (see [www.matthiasheyman.de/Download/SemesterProject.pdf](http://www.matthiasheyman.de/Download/SemesterProject.pdf) for an example).
- 3.) *Teach your students how to do mathematics.* The last hurdle is then that my students not only understand, but also learn how to do mathematics by themselves. This has to be taught. When going over examples, I have to play the role of the student trying to solve a homework problem. I insist on the correct syntax (e.g. the correct use of equal signs and implication arrows) and on neat handwriting. Ultimately, my students have to learn that they will arrive at the correct result as long as every single step is correct (too often I see undergraduate students make a quick but faulty calculation first and then spent a lot of time looking for the mistake). This last issue is best taught one on one with the student in my office hours. Graduate students get individual feedback on how to present their proofs more elegantly, and tips for improving their LaTeX skills.
- 4.) *Try to be your students' role model.* Looking back on my own education, there are about five teachers who have heavily influenced my life, but many more had little impact on me. My goal must always be to be of the first kind. In this way, I can shape my students in more than just their mathematical education - I will affect their personal goals and their outlook on life. Several emails from my students at the end of my courses have already confirmed that I successfully made use of this opportunity.

Matthias Heymann

## Teaching Experience:

2002	Fall	Precalculus (recitation)	2005	Fall	Linear Algebra
2003	Spring	Calculus I (recitation)	2007	Spring	Scientific Computing (TA)
2003	Fall	Calculus II (recitation)	2007	Fall	Linear Algebra
2004	Spring	Linear Algebra	2008	Spring	Probability Theory
2004	Summer	Precalculus	2008	Fall	ODE
2004	Fall	Business Calculus	2009	Spring	Complex Analysis (grad)
2005	Spring	Business Calculus	2009	Fall	Functional Analysis (grad)
2005	Summer	Calculus I			

In 2005 I was nominated for the NYU-wide Dean's Outstanding Graduate Teaching Award.

## Official evaluation of my Spring 2005 Business Calculus class

(can be confirmed by Victoria Johnson, Undergraduate Program Director, johnsonv@cims.nyu.edu)

(33 out of 60 students in my class filled out the questionnaire, the possible rankings were:

1. Poor; 2. Fair; 3. Good; 4. Very Good; 5. Excellent)

Ability to present material clearly: 4.52

Ability to respond to questions: 4.36

Availability during office hours: 4.39

Level of preparations for each class: 4.70

How would you rate the course? 4.09

Overall teaching ability: 4.58

Would you recommend this instructor to a friend? Yes: 31 No: 1 Maybe: 1

### Students' comments in the evaluation (excerpt):

Amazing professor. Really does an amazing job of teaching the material. I used to hate math, and now I can, at least, understand it.

Professor Heymann is very clear with the material, and is interested in how students perform. He wants everyone to succeed, and is extremely helpful.

He goes out of his way to help his students.

He was always clear in giving instructions and notes. He tried to make our learning environment comfortable. Always starts and ends punctually. I enjoyed the instructor.

Professor Heymann is a good instructor and always willing to explain questions effectively when students need his help. He is a nice guy all around.

Professor Heymann is incredibly well organized and neat. This makes understanding the material easier.

Matthias explained concepts well and kept a very good pace.

The professor was excellent. He clearly wrote out the steps which made things much easier to learn.

Get this instructor.

### Unsolicited emails from students (excerpts):

Thank you for everything you have done for me. You are one of the few professors I have seen at NYU who really care about their students and their well-being. Good luck with everything. -- Tonya

Thanks for a good semester. I have to say that out of all the math instructors I have had here at NYU, you are the one who has been able to relay the material in the best possible manner allowing me to learn a lot. Thanks again! Have a great summer! God bless! -- Michelle