

## TEACHING STATEMENT

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Teaching mathematics is a beautiful activity. For me, it is about creating a safe and fun space for learning, about supporting and guiding the students' processes, and about sharing my enthusiasm and my approach to mathematics. Here are a few key aspects from my "philosophy of math education" and my experience (so far!) as a teacher:

**Creating a safe space.** It is of central importance to me that I create an atmosphere and culture in the classroom where students feel comfortable enough to ask questions, make mistakes, express themselves, and to get inspired. I cultivate a common awareness for the fact that individuals have different ways of thinking, and various strengths, weaknesses, and backgrounds. Shame and insecurity, as well as "intellectual machismo" are, I find, common roadblocks to students' learning and to mathematical culture as a whole. Finally, it is good to have fun! For creativity, wonder, and motivation.

To shape the space, I use my own charisma and energy (both playfully and sincerely), and I sometimes address meta-issues directly (while trying to avoid preaching). I aim to be a model through my own actions, for example in the way I treat my own mistakes in front of the students, or by letting them "see inside my head" to share the way I think.

**Ideas, skills, standards.** In my teaching, I place a strong emphasis on ideas and concepts. To me, these are essential for a deeper, transferable understanding, and they are also a great source of inspiration and delight.

I also appreciate the value of learning concrete mathematical skills, such as, for example, proficiency in manipulating equations in algebra or in doing " $\epsilon$ - $\delta$  proofs" in analysis. Such "mathematical handwork" offers important learning experiences and is a part of doing mathematics. However, in my experience, technical aspects are often over-emphasized; they should, in my opinion, always be accompanied by a conceptual understanding of how the specific techniques fit into a larger picture.

Finally, I believe it is important for students to learn about the standards of mathematical rigour, as well as aspects such as elegance or expository clarity. With an understanding and awareness for such meta-aspects of mathematics, students are better able to judge their own work and the work of others.

**Self-empowerment.** In addition to the above, one of the greatest things a teacher can give a student is to help them to become more self-motivated and self-organized learners. As a teacher, this includes supporting students to identify and overcome blockages, and to clarify purposes, goals, interests and motivations. Concrete skills for self-learning range from broad essentials such as time- and energy-management, to specific skills such as how to use a math book for self-study or reference.

**Learning as a teacher; experimentation.** As a last point, I wish to emphasize the common wisdom that teachers are also always learning from their students. For me, this involves truly listening to students and to actually being open to changing. I also believe in experimentation as a vehicle for learning as a teacher. For example, in a recent semester-long seminar, I created and experimented with an online discussion forum, as a learning tool to complement the traditional classroom format. I see enormous potential towards improving the ways that teachers and students learn together, and I am excited to explore the possibilities!