

## TEACHING PHILOSOPHY

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My idea of teaching is explaining and that is how my experience with teaching started. First I was helping my peers at school, then tutoring, finally I have become a math instructor. In some sense I have been a teacher since I started explaining and sharing my knowledge, but it is good to stop for a moment and think: What makes a teacher a good teacher? Am *I* a good teacher? Why do *I* teach? For me it started simply because I knew something that others wanted to learn and I enjoyed sharing my knowledge. From my experience as a student and as an instructor I learned that "to know" is not always enough to make a good teacher. A huge part of a successful teaching is to know how to present the knowledge, to be a "conscious" teacher, and to connect with the people we teach.

For me teaching has two sides: one is dealing with students, second is presenting the material. However, their intersection is nonempty, as I explain mathematics to students not to an empty room. My goal as a teacher is to make a contact with students and make them learn the material. However, I can only provide guidance, motivation, and some pressure, I cannot learn for them. I find it important to make students realize, that they hold responsibility for their own learning and that I can help them structure their learning process. Since learning is also very individual, therefore some modifications and one-on-one work are sometimes required. Thus I do advertise my office hours and if necessary change times and hold additional meetings with students. I would also rather accept late homework than have a student do nothing because of a missed deadline.

As a teacher I interact with students during scheduled class meetings as well as outside the classroom. It is a fine line - I treat students as partners, but I also require respect as an instructor. Students often place themselves in an opposition to a teacher; it is challenging and rewarding to change their attitude and have them work together with the instructor. The goal is to be friendly without being too friendly.

I want students to treat the class work seriously; therefore, I am trying to motivate them with my own example - I do treat my work seriously. I carefully prepare for the classes and return the graded work as promptly as possible. I stress the importance of homework - I collect it on a regular basis and grade it to provide students with the feedback. Since I usually allow students to work together on homework, I use midterm exams and sometimes also quizzes to check the individual progress. All this work counts proportionally towards the final grade. I also try to assess students' opinion about me as an instructor - many times after first month of a semester I asked students to anonymously fill the Early Informal Feedback forms. I found them helpful in identifying students' needs and potential areas for course improvement.

In practice, both interactions with students and the teaching itself, depend on the type of class I teach. Different classes have different dynamics and 100 students listening to a standard lecture in a large classroom is not the same as 35 students in a Mathematica course, meeting in a computer lab almost every day. Teaching Calculus&Mathematica class has the advantage of very direct interactions with students, which also enables the immediate feedback. However, the course material is set, and the teacher has very little influence over the way it is presented. On the other hand, lecturing gives much more freedom of exposition, but it is harder to engage students in any interaction during the lecture - students find safety in numbers. To keep students focused during an hour of a lecture, I alternate between writing on a blackboard and using overhead transparencies together with handouts if possible. I am involving students in the process of problem solving at the board - I ask them to do calculations, search the notes, and recall facts from previous lectures.

In my opinion, there is no universal recipe for an ideal teacher, as the class formats vary and each group of students is a different set of people. However, a good teacher will listen and observe, adapt and change if necessary. I get really enthusiastic when I see that thanks to my explanations students find the connections between facts, definitions and examples. It is really rewarding to help students to understand at least some parts of mathematics.

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