

I began teaching in 1999 as a teaching assistant at Cornell University. Since then I have had ten semester-long appointments as a teaching assistant at Cornell University and I have been an instructor with the University of Illinois and the University of Toronto, both of which are large public schools where incoming students are very diverse in their educational and cultural backgrounds. I have taught a variety of undergraduate courses ranging from introductory calculus to upper level probability and geometry courses. In all capacities, I have taken my teaching duty very seriously and learned to be a strong and resourceful teacher. My experiences with students of various degrees of mathematical expertise have taught me many valuable lessons, some of which I summarize here.

I regard it as very important to build a two-way communication channel between the instructor and the students. At the beginning of each semester I make great efforts to get a feel for the makeup of the class and students' mathematical competence. I consult senior faculty members who have taught the same course recently. I hand out questionnaires in the class and, if the class size is small, I arrange a brief meeting with each of my students. Throughout the semester, I encourage my students to visit me in my office hour or by appointment. I always arrive at the classroom a little bit early and linger after class so that I can have more informal contacts with my students. During the lectures, I frequently raise questions to foster class discussion and I never hesitate to applaud the good points in students' answers.

Outside the classroom, I look for creative ways to stay in touch with my students. For instance, for a course I am teaching this semester I specifically created a Yahoo group as an online forum where students can ask questions and put forward suggestions to help improve the course. This forum was very popular with the students. In their posted messages, many students explained in great detail how they approached a given problem and where they got stuck. This not only allows me to quickly identify any weak spots that my students have, but also brings me insight into students' learning process.

I like to emphasize conceptual understanding of mathematics rather than learning by rote. In my lectures, I try to utilize motivating examples that reveal the secrets of abstract notions. For example, when I am introducing the notion of derivatives for freshmen calculus classes, I always like to challenge my students with the question of defining the instantaneous velocity at time $t = 1$ for an object with the equation of motion $x(t) = t^2$, and provide them the hint of considering the average velocity for a period of time Δt as an approximation. I ask my students to use a calculator to tell me the numerical values of average velocities for different choices of Δt , and

write them down one by one on the blackboard. It usually does not take long for the whole class to realize that the approximation is getting better as Δt is getting smaller. Only at this point do I propose the formal definition of the instantaneous velocity and the first derivative.

At times, I give a narrative account of relevant mathematicians and stories in the history of mathematics. I find that putting mathematics into some historical context helps to stimulate the students' interest and show them how the abstract mathematical notions in the textbook are developed in the real world.

I do understand that mathematical skills can only be honed through a lot of practice. Therefore it is essential to make sure that students have well-balanced, quality homework assignments, specifically designed for some purpose, and to provide them adequate support when they are working on the assignments. Accordingly, when I am teaching lower level undergraduate service courses, lots of examples given in my lectures are modeled after homework problems, and details are carefully worked out step by step on the blackboard. Many students have told me that they really like this practice and consider it one of the strengths in my teaching.

For students of more advanced courses, a good set of homework problems should be a combination of the following two types: first, enough elementary problems through which students will gain familiarity with basic concepts and fundamental methods covered in lectures; second, some challenging problems designed to help students apply in more creative ways these concepts and methods. The students can usually solve the problems of the first sort by imitation, while it requires some imagination to attack the second type. Naturally, when assigning the second type of problems, some care has to be taken by the instructor to have them tailored to the level of the class. For example, when I was teaching MATC 25, a non-Euclidean geometry course at the University of Toronto, I asked my students to prove that the existence of a triangle whose angles sum to 180° is equivalent to Euclid's fifth axiom. Being aware that this question might be too hard for the majority of the class, I carefully broke the question into several sub-problems and gave hints to each difficult step. It was exhilarating to watch how excited some of my students were when they finally came up with a complete proof on their own after much hard work.

I believe that being a good teacher goes beyond being a good lecturer. An ideal teacher is at the same time an educator, one who instills in students a true love for knowledge and helps them develop useful life long learning skills for the acquisition of knowledge.

Some comments from students' teaching evaluation

Prof Lin made excellent use of examples to help students understand the course material. He's very easy to talk to, especially at office hours, and will work with you if you are struggling with any concepts.

He's a truly exceptional teacher! He's excellent at explaining things, designing homework and very fair in grading too. Some of the homework will be basic, some hard. Exams are always basic, so in the end you get the grade you deserve based on your overall effort. Simply perfect!

Was the best teacher I have ever had. If u apply yourself, it's your chance to learn calculus, because he not just know, but also knows how to teach. Lin is so excited about the subject and really helpful and nice.

He is a great teacher! He is very helpful when you need help or anything else. Grading is fair, and if you put in enough effort, you should easily be able to get at least a B. Tests are hard, but curved fairly. I hope I have him again for a professor!

Was very good at explaining the ideas in detail as well as summing them up in non-rigorous but understandable ways.

I suck at anything that has to do with numbers (I'm a business major), but you were so good at explaining the material that I found it easy to understand.

A very patient and clear teacher. Answers all questions and is very knowledgable in a wide range of topics in math.