

Statement of Teaching Philosophy

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I believe the most important qualities in a teacher are organization, clear presentation of the material, stimulating student interest and curiosity, and encouraging student involvement.

From my experience as a teacher, I have discovered how important it is to be clear, effective, and thorough in my presentations. I always carefully consider how to present new material. It is essential to view the material from a student's perspective and realize that, for him, it is new information. This allows me to structure concepts and examples in an easy-to-understand step-by-step sequence. It is easier for students to grasp new ideas if they are related back to previous knowledge, and if I clearly explain topic's relevance and give the appropriate mathematical context. In course evaluations, many students compliment me on my clear, concise, and thorough explanations. Students have mentioned that I stood out among their teachers as one with whom they were able to learn mathematics that had eluded them in the past.

Although organization and preparation are extremely important, flexibility is also crucial in teaching, and instructors must be open to feedback from their students. I observe the expressions on students' faces as I am teaching, which allows me to know when to give another explanation or clarify the solution. Also, I can tell when students will be receptive to new material and not feel overwhelmed by new concepts.

The enthusiasm and caring that an instructor shows help create a friendly and positive atmosphere in the classroom. The teacher's enthusiasm attracts students' attention, interest and curiosity and makes them feel that the material is worth learning. The instructor's caring allows active student involvement, with the students and the instructor forming a team. I always remind students that I already know the material so I am there to help them learn it. I encourage them to feel free to interrupt me, ask questions, or request that an explanation be repeated. This not only helps me shape my presentation according to their needs, but also allows me to gain experience on how to teach that particular concept next time.

My experience as a teacher started in my freshman year of college. After receiving a bronze medal in the 36th International Mathematical Olympiad, I was asked to tutor talented high school students in the Olympiad's practice sessions. I really enjoyed tutoring these bright young students, and I continued to teach these practice sessions throughout college. During my college years, my friends and I organized the bi-weekly public mathematics seminars on behalf of TUBITAK (The National Science Foundation of Turkey). The audience was large and included high school students, teachers, and general math enthusiasts. We had to choose our topics carefully: they had appeal to our diverse audience, and the presentations needed to contain some elegant and interesting results without too many technical details. This seminar series was a unique experience because it enabled me to introduce math concepts to people who normally did not study math in an interesting and comprehensible manner.

As a graduate student at Carnegie Mellon University, I have been solely responsible for teaching four undergraduate courses: AP/EA (Advanced Placement/Early Admissions) Calculus, Calculus I, Differential and Integral Calculus and Differential Equations (twice). In all of these courses, I designed the syllabi, exams, quizzes and homeworks, held office hours and assigned final grades. I also served as a teaching assistant for eleven semesters where I led recitations for a variety of courses. The associate department head chose me to teach the summer

AP/EA calculus course, which is aimed to recruit students to Carnegie Mellon. During the past five years I have taught a diverse collection of students, from high school students to college juniors, and from humanities to engineering majors. Realizing that different audiences have different backgrounds, talents, and expectations for the course, I was able to develop teaching strategies that I feel are optimum for the students. The graduate class I took entitled Math Course Design also provided me with a myriad of course organization and teaching techniques, and advice about situations that can be encountered in the classroom.

Undeniably, teaching well requires effort. I think that a teacher should obtain intrinsic rewards and satisfaction from his or her job and be willing to go the extra mile for the students. Witnessing the difference I make and knowing that I help my students succeed, together with the satisfaction of a job well done, motivate me to do my best as a teacher. I find teaching to be a very rewarding experience which I would like to continue.