

## 1 My teaching philosophy

I love learning and discovering new things. I believe that the pursuit of knowledge is the most important and fulfilling human endeavor. This is why I have made academia my career. Conversely this is also why I have a strong belief in importance of teaching. Our knowledge and discoveries are only useful as long as they are passed on to the next generation. Indeed I would not be in the position I am now if it were not for the wonderful teachers and professors who have taught me over the years. Now that I have been teaching for 5 years I have become part of this cycle and I enjoy it as much as doing research.

Over the years I have come to recognize that a fundamental quality of a good teacher is that the teacher himself is learning as he teaches. He is learning how the students think, what their difficulties are and how to be more effective teacher. One might teach the same subject many times and discover new subtleties every time. Although this is not necessarily unique to mathematics, I believe it to be especially true in math. Teaching math, is thus a very dynamic activity. I have heard some of my colleagues comment how they dread teaching the same class again; however, I have never minded teaching the same class multiple times as every time it is a unique experience to me. I never teach a class exactly the same way because I draw on my previous experience and make adjustments such as adding new material or even taking an entirely a new approach.

## 2 My experience

My main teaching experience consists of 5 years as a teaching assistant (TA). I have taught a number of classes at UCLA ranging from basic calculus, introduction to C++ for mathematics majors to upper division complex analysis. As a result, I have had the pleasure of teaching a wide variety of students ranging from social sciences majors and pre-med to engineers and math majors. As a teaching assistant for mathematics classes I was responsible for leading discussions for about 30 students. My duties were typical of any graduate student in mathematics. However, I often went above and beyond by preparing extra study questions and review materials.

I would like to single out in particular my experience as a PIC (Program in computing) TA. This is the C++ class for mathematics majors I mentioned above. I believe having taught this class gives me a unique experience beyond other graduate students who have merely taught mathematics courses. TAing mathematics courses mainly involves problem solving and assisting students with their homework problems. However, when I TAed PIC classes I met with my students twice a week and I was responsible for giving a lecture. There was a professor who gave lectures every week as well, but it was my responsibility to fill the two discussion hours with lectures of my own. I taught this class a number of times and I continually improved and developed my skills as a lecturer with each class. I believe this class was a good introduction to what

it is like to run a class of my own. When I subsequently taught upper division discussion sections, I was well prepared to conduct the discussion in a similarly lecture-like format when appropriate.

Through out my graduate education, I have also worked as a private tutor. This experience has strengthened my one-on-one interaction with my students, especially in conducting office hours. I pride myself in the fact that any student who comes to see me in my office about a homework problem leaves, not just the answer to the question, but also understanding the concept behind the question.

During my graduate career we also ran several seminars where I lectured for most of the quarter. In particular we had a seminar on my thesis were I lectured the entire quarter. I believe that this experience has also helped me become a great lecturer. I have the ability to speak in depth about complex topics, present the material in an accessible and clear way.

### **3 My teaching methods**

A lot of preparation goes into a good lecture, and I always strive to present a lecture that is well thought out in advance with many examples. But a good lecture is not merely one that is presented well, but also one which is interesting and goes beyond the text book. When appropriate I incorporate interesting anecdotes and stories that can bring the topic to either historical or contextual perspective. My soal purpose in this is to help the student see the larger picture. I make a point not to follow the book word for word, rather I structure the information presented in a consistent manner so that the student has no difficulty reviewing the material from the book, but also at the same time feels that the lectures are worth attending.

To help understand the importance of the concept and to make the topic more interesting. Usually my lectures, although not directly following any text, draws vast majority of material from the book that the student has no difficulty reviewing the material after the lecture.

When lecturing a class of hundred students or more, it is difficult, for the students, to have any dialogue with the professor during the lecture. A few clarifying questions may be asked, but in general a more in-depth discussion with students during lectures is not feasible. As a result I consider office hours to be extreamly important Students should not be reticent to talk to the professor. I take pride in fostering an environment where students are unafraid to come talk to me about any confusion they have with course materials. I have observed students refraining from attending office hours because they are not accustomed to it, they are nervous about it or feel like office hours will not be helpful. I have always made a deliberate effort to counter each of these potential obstacles. I never solve a problem directly for a student in the office hour rather I clear up the confusions about concept that allows the student to solve the problem. I am very strong believer in the socratic method. Students understand the solution better if they are able to arrive to it with some guidance and they gain confidence in themselves and start to feel that the material is accessible to them.

I have always gone above and beyond to help my students. I was very prompt in handling emails from students, I made myself very available to students and I would not turn away student with a question if I had time to talk to them my door was open weather i had official office hours scheduled or not. I had no qualms about office hours going slightly beyond the time allotted as long as there were questions left.

## **4 My accomplishments**

I believe my students benefitted greatly from my teaching style since the exam means of my sections were fairly consistently be above the class mean. This was reflected in my excellent teaching evaluations. After my first year as a TA I consistently scored very high evaluations and received very positive comments from my students. On number of occasions the students expressed that I was the reason they passed the class or I made the material interesting and accessible. A few times the evaluations even suggested that I should have been the professor for the class. It is very gratifying to receive such comments and I must say that they do inspire me to try even harder next time.