Teaching Statement

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One of the primary challenges in teaching is trying to strike a balance between pushing students with difficult, engaging material and making sure that students master the fundamentals required in a given course. Not emphasizing the essential subject matter in a course can have dramatic effects down the line; math courses in particular tend to build on one another and share many central themes. For this reason I like to reinforce students’ reading and reiterate key theorems throughout many of my lectures. Theorems are primarily exhibited by examples; this provides a useful mechanism to both reintroduce these theorems and to indicate how they can be used. The content of these examples is where I usually try to fit in the more difficult material. This really depends on the comfort level I am feeling from the class. If it seems like students are struggling, then more basic examples are preferred. If, on the other hand, students seem confident, bored, or otherwise comfortable, then I give them something more engaging. This often results in longer preparation time for classes but I feel the flexibility of being able to teach at the students’ level is well worth the effort. From one student in an introductory linear algebra course: “His presentation of the course elucidates both the computational and theoretical aspects of the subject at hand and thus allows the student comprehensive understanding; he does so in a manner accessible to the student (with consideration that this is often the first upper division course students take) while still challenging and stimulating them.”

Office hours follow a similar trend. First, I give the class a few choices of office hours and try to come up with times that as many students as possible can make. This choice hopefully encourages students to attend these office hours as the individualized attention that can be provided there can be extremely beneficial. Within office hours I like to rotate between students but, as in class, I place priority on the more standard questions. If students appear to be motivated and content with the standard material I like to give them an indication of what is to come: generalizations of the current subject matter, indications of how logic similar to what they are using applies in future math classes, or other interesting related ideas are all fair game. I like to encourage a mindset of constant learning and exposing students to these more advanced ideas hopefully keeps them interested and motivated. From a student in an honors analysis course: “His examples were thought provoking, and he was very available outside of the discussion section. Often, he would stay past his scheduled hours in order to make sure people who were struggling would understand, or just to talk about some other cool topics related to the course; he’s a very dedicated instructor, and I really appreciate all his help this quarter.”

In addition to lecture and office hours I have found email communication and review sessions to be very beneficial for student understanding. I encourage students to send me emails with questions that they may have in the course and sometimes send them materials to supplement discussions. As one student from calculus had to say: “He helped us out to prepare for midterms and finals by sending is practice problems through email and encouraged us to email him questions about home works or problems in general. This was quite helpful and he responded quickly too. His discussions
were well thought out and offered extra review session to get more help to prepare for midterms and finals which was really helpful.” I have found review sessions before midterms and finals to be very useful in tying up loose ends in students’ understanding. In these sessions students are generally able to gauge how well they know the material and what they can improve. I tend to run these sessions an evening a few days before the exam so that students have some time to reflect on their progress. Most students I have talked to find this approach very helpful; their positive response to my teaching methods has contributed to the math department to giving me a teaching award.

Ultimately, I feel the key to good teaching is to keep students motivated. By providing stimulating examples, holding engaging office hours, and maintaining high availability I encourage students to learn the course material to the best of their ability. In doing so I hope that, like me, they may find a subject they truly enjoy. As one student from a course in linear algebra had to say: “Jeff was an excellent TA. He really has a deep understanding of the material and always makes himself available to help students. More importantly, he truly has a passion and a talent for mathematics and I highly recommend him for any and all considerations.”