TEACHING STATEMENT
SON N.T. TU

1. Teaching philosophy

My teaching philosophy can be summarized by simply I want to be a good teacher and I try my best to become one. In my opinion, the critical factors that affect the learning experience are motivation, expectation and presentation.

1.1. Motivation. Motivation is the most important factor, more than technical details. As once being a student, if I cannot find a course interesting or useful, I will not be able to spend a decent effort to learn it. Therefore whenever I can, I try to talk about motivation in the course, like what you can do with these knowledge or, what is the beauties of the techniques they are about to learn. It is hard, turning abstract mathematical concepts into something tangible that connect to the students’ lives and provoke their curiosities requires a lot of effort and knowledge outside of math, and it is not always possible. However, it is rewarding for me when I saw my students motivated.

1.2. Expectation. In general, my principle is to have not low or high, but right expectation for students. It is very easy to set the bar too high, which students get tired and lose momentum to learn. I try to put myself in their shoes, take into account their workloads, background and feedback from past students to design the structure of the course. The right expectation could get students engaged in learning rather than worried too much about grading. Additionally, when supervising, I adjusted my expectations for students as I knew them better over time. For example, I try to adjust the tasks I give to students based on how much they get them done, and sometime break down the given task into concrete tasks with specific instructions. This way, my students can learn and make progress at the same time, and therefore get motivated.

1.3. Presentation. For presentation, I think students should first get a big picture before going to the details, at least for those in low-level classes which I have taught the most. Learning through example is one way I found very useful, after carefully presenting a clear example and the logic behind it, I try to encourage students to think for themselves with similar and related problems, by phrasing suggestions in terms of questions when they need help. The feeling of progressing step by step is very rewarding to the individual, based on my experience.

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2. Teaching experiences

At University of Wisconsin–Madison (UW-Madison), I have been fortunate to be a teaching assistant (TA) for most of my time as a graduate student. The classes that I have TA’ed for are the equivalences of Single-variable Calculus, Multivariable Calculus and Differential Equations, where most of the students are not math majors. My duties include holding recitations to go over examples and answering questions about the main lectures, grading, and holding office hours. I was also fortunate to teach college algebra as an instructor a couple of times, directly and remotely.

2.1. Recitation and Active Learning. During recitations, I make sure to review the concepts in the lectures and encourage students to ask questions. I try to ask a lot of simple questions to show them that they are welcomed and I am there to help. I found telling some histories of some concepts or some related high level (cool research) problems motivate them a lot. I encourage my students to form study groups with their classmates. I also prepare worksheets for them to work in small groups together during recitations. To make the experience fun, I encourage the groups to compete with each other to go to the blackboard to solve the problems in the worksheets. Outside of classrooms, I encourage the students to come to office hours or make an appointment with me to ask questions.

2.2. Teaching during COVID-19. Applying technology into teaching is always fun and interesting, for both my students and I. I have implemented a couple of different methods (trials and errors) during the hard time with COVID to keep students engaged. For smaller classes, where I had less than twenty students I used Microsoft Team (some other times I used Slack as well) to connect people and facilitate a sense of community. For review sessions and office hours, I found that using https://spatial.chat/ is quite nice, although for a bigger class size it still has some limits (bandwidth, prices, ...).

3. Final words

I enjoy teaching because it gives me an opportunity to do something meaningful to this society, thus I hope to bring my quality and vision to the board of your school to support next generations. Of course, going from small size recitation class to a big class is a lot different. That said, I still continue to refine my teaching approach. One way that I particularly find helpful is to hold the mindset of a student, and thus being a constant learner to learn from my colleagues.

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