

## Teaching Statement

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As a graduate student at the University of Connecticut, I started teaching in my second year. I was the TA of Principle of Microeconomics before I started to teach my own courses. Since being the instructor of record, I have taught the whole sequence of the quantitative economic/econometric courses. I know that courses involving a lot of math can be boring, so I tried different ways to make class more interesting and appealing to students.

ECON 2311 Empirical Methods of Economics I is the first course I taught as an instructor of record. The course requires a lot of statistical knowledges and mathematical proofs because the course wants students to understand simple and multiple regressions as well as how to explain regression results. I know that theorems and proofs are really boring to students, so I tried to show a lot of theorems by using Stata. The students really liked that I could show theorems in Stata. For example, I reviewed many statistical concepts during the first several classes. When I tried to explain the Law of Large Numbers to the students, I wrote a very simple dice roll simulator in STATA and both visually and numerically showing the students that as the number of observations increases the sample mean gets closer and closer to the population mean. I also used that program as a chance for the students to become familiar with STATA since the main software I used for that course was STATA. One of the students even told me in the email at the end of the semester that he really liked the way I showed theorems using Stata since it is easier to fully understand and visualize the econometrics. Another way that I made my class more appealing was to show video clips in class. For example, when I talked about causal inference in class, I showed several YouTube clips talking about why there is no causal effect between the number of death by drowning and the number of ice cream sold at beaches even though the estimates told us there was strong correlation between those two factors. A good video clip can really help me explain terms very clearly. Students are more relaxed but at the same time more focused. I find it is a good way to deviate from the regular lecture form sometime during class. However, I also received complaints from the students that they did not really like me going over slides during the class. Therefore, I made changes on the use of slides in my following semesters, which I discuss below.

Then I taught ECON 2301 Mathematical Economics. This course is an economic version of calculus and linear algebra combined. Since I received complains about the slides in the previous semester, I decided to upload the notes online but write everything on white board during class. This way, the students would be more involved in class. As the students wrote down notes, it would be easier for them to understand the materials. While the course did not require students to use any software, I tried to make the course as practical as possible by giving them examples in either microeconomics or macroeconomics. I found that it was a good chance for the students to review what they had learned in their intermediate economic courses. For example, when talking about the Cramer's Rule, I introduced Leontief Input-Output Model for the students. I found most of the students had not heard of this model before. Thus, I spent a whole class really explaining the model and how we could apply the Cramer's Rule to solve the model if there is a real solution. The students really enjoyed implementing what they had learned on these economic models.

The last course in the whole sequence of the quantitative economic courses is ECON 2312 Empirical Method in Economics II. This course follows ECON 2311 and introduces more advanced techniques in the modern econometrics. Most of the students who enrolled my ECON 2312 were senior students. They either were looking for a job or already had a job offer. Therefore, I decided to teach them something more practical and useful for their future jobs. Machine learning has been a hot topic in recent years. A lot of private sector companies want to find employees who can do machine learning. So, I spent a total of two weeks talking about machine learning techniques, such as Ridge regression, LASSO, m-fold cross-validation, and Principal Component Analysis for the students. From my perspective, a lot of the students were really interested in those topics, and one of my students even told me at the end of the semester that he wished that I had talked more about the machine learning part because he found it was really useful for his future position.

Overall, from my experience as an instructor of record, I gained a lot of experience in teaching. I am also on my way to becoming a good teacher. I listened to my students' advice. I agreed that slides sometimes made it hard for students to focus during class because I might go over the slides too fast. I will keep using handwriting on white board in all my future courses. The math can be boring, but a good teacher can find a way to make it appealing to anyone. I found visualization was really a good way for the students to understand theorems and theories. Also, a good teacher should be always learning in this fast-paced world. Knowledge is increasing every day. I will always update my course to keep up with the news. My students will definitely benefit from new knowledge.