

Teaching Statement

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As a graduate student at the University of Connecticut, I started to teach in my third year. I was the TA of Principle of Microeconomics, Intermediate Microeconomics, Financial Econometrics, and Econometrics I (Ph.D. level) before being the instructor of record. I have taught two semesters of Econometrics and one semester of Elementary of Forecasting for undergraduates. My teaching interests are quantitative methods for economics and business, as well as machine learning and open-source programming (i.e., R/Python). The goal of my teaching is for students to have solid knowledge and critical thinking of the core ideas in the course and knowing how to apply them in practice.

Econometrics is the first course I taught as an instructor of record. This course is an introduction to empirical analyzing and testing economic theories. It requires the basic statistical and probability theories for students to understand the idea of regression analysis as well as its application in economics. To make sure students have solid training, I organized my lectures with clear objects of learning and corresponding contents with many examples. I always post the slides one day before a new lecture and have a brief review for the previous lecture at the beginning of my lecture. This allows students to be well prepared for class according to their feedback. I know that theories in econometrics are hard to understand for Econ major students, so I tried to connect the core ideas of econometrics to the real-world application in economics. For example, to illustrate the ideas of statistical estimation and inference, I started my class with a policy question: “what is the quantitative effect of reducing class size on student achievement?”. Then, I showed students a real-world dataset that includes the average grade test scores and student-teacher ratio in Stata and asked them how we can use the data to find quantitative evidence. Next, I will guide them to find the evidence using Stata by employing the tools in econometrics. In this applied learning process, students not only actively engaged with materials related to real-world context but also had a deeper understanding of the theories behind the applications. Besides, students also learned to use Stata in the process. The class switched from in-person to online class in the middle of the semester due to the pandemic. Many students felt unaccommodated by this change and lost their focus in class. After realizing the difference between online and in-person classes, I intentionally simply and slow down the pace of the lectures to relieve students’ pressure. I also brought more discussion into our class so that students can have more attention to the classes online.

The other course in my teaching record is the Elementary of Forecasting. I taught this course online for one semester and I’m currently teaching this course again in person. This course is an upper-level undergraduate introduction to forecasting, focusing on core modeling and forecasting methods that are widely applicable. The prerequisite courses are the econometrics

course that I taught before, but many students either didn't take that course or have already forgotten what they have learned before. Therefore, I spent two weeks reviewing the fundamental ideas in statistics and regression analysis that are commonly used in forecasting. I designed this course to be applications-oriented, in which I illustrated all topics with detailed real-world applications to mimic typical forecasting situations. For example, after introducing how to model, estimate and forecast the trend, I applied those methods to the U.S. current-dollar retail sales. I first demonstrated a time series plot of the retail sales data, which displays a clear nonlinear trend. Then, I guided students to find the results of fitting a nonlinear trend model into the data and the corresponding statistics characteristics such as the Durbin-Watson statistics. In addition to the regression results, students need to know how to interpret them with their understanding. I evaluated this by asking questions and having discussions in class and assigning homework after class. The software I used for this course is R. Most students didn't learn R before, so I prepared the detailed R notes that were available to download one day before the class and uploaded the recordings online for students to review later. In the final, I was glad to see that students could apply those tools they have learned in class and use R to analyze the projects based on their interests. For example, a student forecasted the level of happiness of different countries based on the datasets she collected online.

As a new instructor, I realized that there are still many things for me to improve. Students gave me many feedbacks to improve the quality of my courses, such as using more visual-based learning and more handwriting for them to understand algebra better. Also, some students felt they couldn't catch up the lecture sometimes due to the complicated concepts. I really appreciate the feedbacks that students gave to me and I'm currently using them to improve the effectiveness of my teaching.

Overall, I gained a lot of teaching experience from the courses I taught. I believe I am on my way to becoming a good teacher. I have well-prepared and organized lectures to make sure solid training for students. I agree that some theories are hard to understand and boring so I connected them with real-world applications. I'm a good listener who listens to students' feedback and advice. I'm trying to combine more visual-based learning in my current classes and use handwriting to explain algebra better. Furthermore, I would like to update my course to keep up with the new knowledge such as the machine learning methods in economics.