

Teaching Statement

As a graduate student at the University of Connecticut, I gained two years of direct teaching experience in Econometrics and Elementary of Forecasting for undergraduates. My teaching goal is to develop students with solid training as well as critical thinking of the core ideas in the courses and knowing how to apply them in practice. I was the TA of Principle of Microeconomics, Intermediate Microeconomics, Financial Econometrics, and Econometrics (Ph.D. level) before being the instructor of record. My teaching interests are quantitative methods for economics and business, as well as machine learning and open-source programming (i.e., R/Python).

Econometrics is the first course I taught as an instructor of record. This is a larger course with more than 50 students and around half of them came from different countries. It covers the fundamental tools for students to understand empirical analysis and test economic theories. To develop students with solid training, I organized my lectures with clear objects of learning and corresponding content 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. According to students' feedback, this allows them to be well prepared for class. To intrigue students' curiosity and interest, I designed an application-oriented curriculum that used interesting applications to motivate the theory. 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 data set that includes key variables in Stata and asked them how we could use the data set to find evidence. Next, I guided them to find the evidence by employing the tools in econometrics. In this applied learning process, students were not only actively engaged with materials related to real-world context but also had a deeper understanding of the theories behind the applications.

I also learned to be a better teacher due to the pandemic. The Econometrics 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 simplified and slowed down the pace of the lectures to relieve their pressure. I also brought more discussions into our class to make our online class more engaging and dynamic so that students would regain their attention to the class.

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 and introduction of statistics, but many students either didn't take those courses before or have forgotten what they have learned before. Therefore, I spent two weeks reviewing the core 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. To cultivate students' critical thinking, I employed the Socratic Questioning method by asking questions that got students to think more about the assumptions imposed behind those applications. For example, after we run a regression for a study, I would like to ask, "Does the first assumption of the OLS method satisfied?", "What are the consequences if it is violated?", "How can we address this issue?". In addition to the forecasting results, it is critical for students 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. To develop students with the necessary programming skills in economic analysis, I offered R programming labs in my course. I prepared the detailed R notes that were available to download one day before my labs. In the final, I was glad to see that students could 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 junior instructor, I believe listening to students' feedbacks is a critical way to improve the effectiveness of teaching. For example, in students' feedbacks, they mentioned it would be better for them to understand if I could use more visual-based learning and handwriting for complicated algebra. I really appreciate the feedback that students gave to me and I'm currently using them to improve the course I'm teaching. For example, when I explain the Central Limit Theorem to students, I run a simple simulation in R and visually showing the students that the sampling distribution gets closer and closer to a normal distribution as the observations increase.

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 so I connected them with real-world applications. I'm a good listener who listens to students' feedbacks and uses them to improve my teaching skills. In the future, I would like to keep learning new skills to improve the effectiveness of my teaching as well as update my courses to keep up with the new knowledge, such as the machine learning methods in economics.