UCONN

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Teaching Statement

As a graduate student at the University of Connecticut, I gained two years of direct teaching experience in Econometrics and Elementary Economic Forecasting for undergraduates. My teaching philosophy is that students with social, cultural, and learning differences can find their voices in class. My teaching goal is to develop students with solid training and critical thinking of the core ideas and 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, machine learning, micro/macroeconomics, and open-source programming (i.e., R/Python).

Econometrics is the first course I taught as an instructor of record. It is an extensive course with more than 40 students, and around half of them come from different countries. It covers the fundamental tools for students to understand empirical analysis and test economic theories. To engage with every student in such a large class and develop an inclusive climate, I assigned small groups, mixing students with different backgrounds, for in-class discussions. During the discussion, I reached out to the quiet students who sat at the back of the classroom and encouraged them to share their views. I organized my courses with transparent learning objects and related content with many examples to develop students with solid training. I always post the slides one day before a new topic and briefly review the previous lecture at the beginning of my course. According to students' feedback, this allows them to be well prepared for the class.

I designed an application-oriented curriculum that used interesting applications to motivate the theories to intrigue students' curiosity and interest. 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 critical variables in Stata and asked them how we could use the data set to find evidence. Next, I guided them to discover the proof by employing the tools in econometrics. In this applied learning process, students were actively engaged with materials related to real-world context and had a deeper understanding of the theories behind the applications.

I learned to be a better teacher from the pandemic. Due to the pandemic, the Econometrics class switched from in-person to an online class in the middle of the semester. Many students felt unaccommodated by this change and lost their focus in class. After realizing the differences

between online and in-person classes, I intentionally simplified and slowed down the pace of my 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 Elementary Economic Forecasting. This course is an upper-level undergraduate introduction to forecasting, focusing on core modeling and widely applicable forecasting methods. The prerequisite courses are econometrics and the introduction of statistics, but many students either didn't take those courses or forgot what they had learned before. Therefore, I spent two weeks reviewing the core ideas of statistics and regression analysis commonly used in forecasting. 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 time-series trend, I demonstrated them in R programming to analyze the U.S. current-dollar retail sales. To cultivate students' critical thinking, I employed the Socratic Questioning method by asking questions that led students to think more about the assumptions imposed behind those applications. For example, after we applied a linear regression model for a study, I would like to ask, "Is the linear assumption in the model appropriate?", "What are the consequences if it is not?", "How can we test the assumption?".

In addition to the forecasting results, students must understand how to interpret them. 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. I was glad that students could write their own R codes 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' feedback is critical to improving teaching effectiveness. For example, in students' feedback, they mentioned it would be better for them to understand if I could use more visual-based learning and handwriting for complicated algebra. I appreciated 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 R simulation and visually show 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 have strong foundation. I created an inclusive climate that involves every student in the classroom. I have well-prepared and organized lectures to make sure solid training for students. I used real-world applications to motivate theories. I'm a good listener who listens to students' feedback and uses them to improve my teaching skills. In the future, I would like to keep learning new methods to improve the effectiveness of my teaching and update my courses to keep up with the latest knowledge, such as the machine learning methods in economics.