

# Teaching Statement

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## Teaching Experience

I have the pleasure of working as an instructor in a graduate-level course on time series analysis with applications in R at WashU, which began in the Fall of 2018. The main objective was to develop the skills needed to address empirical questions using time series models. I taught methods for estimation, testing, and prediction in time series, and provided an introduction to spectral analysis and non-parametric estimation. I made frequent use of the R programming language, offering students practical experience with one of the most common statistical software programs used in both academia and industry.

I have also taught two undergraduate courses: Statistics; Options futures and other derivatives at Wuhan University. Statistics is the art and science of transforming information into knowledge. In this course, I taught mainly undergraduate students in economics and math. I presented many examples in lectures and my homework assignments. This helped the students to understand why statistics was so important. The options futures and other derivatives course covered derivative securities such as futures, forwards, swaps and options. The course presented a conceptual framework for understanding how to price derivatives and design risk management strategies.

I served as a teaching assistant for Introduction to Microeconomics for 4 semesters. I am in charge of weekly tutorials, review sessions and office hours for all undergraduate students at WashU.

## Teaching Philosophy

From my experiences learning and teaching economics, I have learned to center my teaching on five principles:

**Prepare well:** Preparation on the part of the instructor is the single biggest predictor of whether a given lesson or lecture will be successful. By spending a considerable amount of time ahead of the lecture itself working through, in full detail, the problems or concepts to be introduced to students, an instructor guarantees two things: first, that there are no hidden complications that could detract from student learning, and second, that the instructor is so readily fluent in the details that they have the mental capacity to respond in the moment to the bigger issues or concerns that arise as students grapple with the material. Although this discussion of preparation may sound like common sense, I have learned through experience that outlining the material in advance in broad terms is not sufficient.

Only by putting in the effort ahead of class on the details, can they guarantee that the majority of students have a reasonable chance of absorbing the material.

**Tell stories:** Students will learn more if they can see its relevance to them. When I teach, I use stories as often as possible. These can be from students' lives or general current events. I have felt that good illustrative examples are immensely useful for Econometrics and Statistics courses. Examples that are relevant to their lives help them understand different distributions and processes easily. I encourage students to think about the applicability of the methods to their research.

**Explain in details:** When teaching econometrics, I strongly emphasize what parameters mean in a model, and what the identification assumption is. Econometrics is not only about math, and one needs to understand in depth what the instrument, the treatment, and the parameters of interest are and how to interpret them. Phrased incorrectly, a credible assumption can look much stronger than it is.

**Be around:** If students want to learn I want to be there. If they need help I will help them. Conversation stimulates critical thinking and induces learning. I want students to learn new ideas, hear diverse perspectives, and gain new perspectives.

**Code and analyze data:** The best way to get familiar with different statistical methods is to code by themselves. I view empirical experience, in particular a familiarity with basic challenges and tools involved in the use of data, as one of the more important pieces in an econometric student's toolkit. Efficiently processing and analyzing data typically requires familiarity with a statistical analysis language such as R or Python. I will require my students, in most econometric courses to deal in practical terms with the data download, cleaning, and analysis steps. These types of exercises and experience can of course be scaled to the difficulty and experience level of students which will differ by context. Learning to code is becoming more and more important in econometrics.

## Teaching Interests

I am passionate about teaching a variety of econometrics courses at all levels. During my graduate studies at WashU, I have received broad training in econometrics and statistics, including time series analysis, statistical inference and financial econometrics. I would also like to teach applied econometrics, either at the undergraduate or the graduate level. Apart from basic courses on linear and non-linear models, I would place a strong value on formalizing the causal identification issue. I am also happy to teach a course on statistics and probability theory for economic students as statistics is the starting point that lit up my enthusiasm for teaching.