

# Teaching Statement

Prakrati Thakur

*Teaching might even be the greatest of the arts since the medium is the human mind and spirit.*

—John Steinbeck

A teacher's work shapes minds and resonates across generations of students. With this belief, I strive to achieve three goals in my teaching: clarifying the details in simple terms, connecting the details to the big picture, and creating a fertile environment for interaction. As a teaching assistant for M. S. Policy Economics (MSPE) at the University of Illinois at Urbana Champaign (UIUC), I have alternated between two core courses—Economic Statistics and Econometrics—in the Fall and Spring semesters since 2017. For both courses, I lead a review session each week as a part of my main responsibilities. For each session, my preparation begins early, which grants me the privilege to carefully choose examples most helpful in clarifying the concepts covered in lectures and design the overall flow of the class. For me, the best way to learn has been by honestly making an effort to find the solutions myself. To foster the same self-reliance among students, I encourage them to attempt each problem independently before I demonstrate its solution. Since my students come from very different educational backgrounds, I am mindful about explaining each detail and resolving doubts thoroughly such that no student is left behind. During office hours, I provide a range of guidance tailored to students' individual needs, from simply suggesting reference books to actually directing their thinking in how to approach problems. As I go from one step to the next, I prompt the students to chime in with the reasoning or the concept applied at each stage. Encouraging class participation further helps me gauge whether I need to discuss a topic differently and think of better ways of explaining concepts, which, in turn, facilitates my own growth as a teacher.

As a teaching assistant for the Econometrics course, I have also guided students on a diverse set of topics for their term projects. At all stages of the project, I make every effort to provide extensive feedback that increases the students' grasp on the course material and enables them to see the underlying economic forces in their econometric analyses. In addition, I offer regular instruction on coding languages, Stata and R, to assist students with their papers. I believe that an understanding of what one wants to achieve with their code inculcates the confidence to expand one's skills to another coding language and implement said goals when the need arises. With this broad aim in mind, I emphasise the logic behind the algorithms in addition to the specifics of a coding language and the capabilities of different tools. For example, when demonstrating Monte Carlo simulations to solve probability problems, I first explain the steps that lead up to the calculation of relative frequency and how the Law of Large Numbers works before discussing the individual commands to tackle each step.

One of the challenges in today's time is effective communication in an online classroom. I believe that teaching in different settings requires adaption and the use of appropriate technology that delivers the end goal. Apart from using the "hand-raising" and "break-out room" features on Zoom, I have discovered that being ready with a stylus to demonstrate proofs or derivations has kept my students engaged through the class. My student evaluations from Spring 2020-Summer 2021, when I taught entirely online, are a testament to the effectiveness of the method. Overall, I have an average rating of 4.6 on a 5-point scale for overall teaching effectiveness on teaching evaluations by students. In Spring 2021, I received the Robert

E. Demarest Memorial Teaching Award from the Department of Economics at UIUC. The Economics Department presents this award, based on teaching evaluations and endorsements from the instructor, annually to two teaching assistants out of 100 for their contributions in teaching. I have also been selected in UIUC's List of Teachers Ranked as Excellent by their Students (i.e. top 30% university-wide ratings) every semester that I have taught with top 10% university-wide ratings in several semesters.

I believe that my teaching experience has equipped me well to teach both undergraduate and graduate courses. Aligning with my research interests, I am particularly keen on teaching a class on international trade at both these levels. At the undergraduate level, my ideal course would build the foundation for international trade by covering classical models, related empirics, and introducing students to trade's work-horse gravity models. The Krugman, Obstfeld, and Melitz (2018) textbook is a reliable and essential resource for these topics. Students would become well-versed with the main concepts covered in class through bi-weekly assignments, a midterm, and a final exam. At the graduate level, the goal would be to prepare students wishing to pursue further graduate studies for a research career and those wishing industry positions to acquire the tools to analyze complex problems. In this course, I look forward to covering the newer trade theory, including the integrated multi-sector frameworks and the host of theoretical micro-foundations leading to gravity equations. Given my research experience at the intersection of trade and the environment, I would bring special knowledge of the theory and empirics studying the effects of trade on the environment. In addition to deep-diving into the literature on these advanced topics, I would also recommend the textbooks by Feenstra (2002) and Gopinath, Helpman, and Rogoff (2016) as essential background readings for this course. The students would be required to solve regular assignments on two essential components of this course—deriving theoretical results and coding algorithms that solve for the equilibrium or estimate a parameter. They will also learn to analyze the strengths and weakness of economics papers through writing referee reports on at least two trade papers. To get the research juices flowing, the course would culminate in an end-of-the-semester project proposal by the students.

I have experience coding algorithms for my own research and for a graduate-level machine learning course, a 4-year experience of teaching statistics and econometrics at the graduate level, and a love for translating algorithms into code in the most efficient way possible. Thus, I am excited to teach an undergraduate or graduate machine learning course for budding economists if the opportunity strikes. Hastie, Tibshirani, and Friedman (2001) would serve as an excellent free online resource for this course. I would carefully design regular assignments that focus on students' learning to code algorithms from scratch. At the end of the course, they would have to submit a final project, where students develop a research question, find relevant data, and apply an efficient machine learning algorithm for their topic. The goal of the course would be to familiarize students with the capabilities of machine learning in the economic context and to develop the skills and the confidence to apply it in future.

## REFERENCES

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## Teaching Evaluations

Term	Course	Teaching Effectiveness
Fall 2017	Econ 502: Economic Statistics	4.8 <sup>§</sup>
Spring 2018	Econ 503: Econometrics	4.5*
Fall 2018	Econ 502: Economic Statistics	4.4*
Spring 2019	Econ 503: Econometrics	4.8**
Fall 2019	Econ 502: Economic Statistics	4.4*
Spring 2020	Econ 503: Econometrics	4.61*
Fall 2020	Econ 502: Economic Statistics	4.73**
Spring 2021	Econ 503: Econometrics	4.61*
Summer 2021	Econ 503: Econometrics	4.83**

The figures in the column Teaching Effectiveness represent average ratings on the item “Rate the instructor’s overall teaching effectiveness” in the end-of-semester [Instructor & Course Evaluation System \(ICES\)](#) questionnaire. Students rate on a 5-point scale, with 5 being exceptionally high and 1 being exceptionally low. The \* denotes top 30% university-wide ratings, i.e., [List of Teachers Ranked as Excellent by Their Students](#), and \*\* denotes top 10% university-wide ratings. The § denotes ranking not evaluated.

**Select Comments by Students.** The first comment nicely encapsulates the feedback I have received over the past four years. The remaining comments echo the sentiments expressed in the first.

- “Prakrati is an exceptional TA for the course. She is always prepared for TA sessions, replies to emails and concerns promptly, and offers appropriate feedback and guidance throughout the course of the semester. Be it doubts from lecture notes or STATA/R codes that you’re not sure about, she always knows how to address those issues. She’s been super helpful and resourceful throughout the semester and she’s just the best TA ever. I wish I had her as my TA for ECON 502 - Economic Statistics as well.”
- “Prakrati prepares her classes very well. She paced herself and explained everything following correct methods.”
- “The major strengths of the Instructor is her ability to explain the materials and gave real world examples. Overall, the course content was great.”
- “She is patient, careful and has a good attitude. She will prepare her lectures in detail in advance. I learned a lot.”
- “I really like that the instructor showed us how to solve mathematical proofs of topics discussed in class prior to the suspension of face-to-face instruction.”
- “Prakarti very helpful, patient and care for our improvement. She teaches in a very efficient and effective way. She is the excellence!”
- “TA is very friendly and she remembered every one’s problem and helped me solve it. She explained the concept very clearly and her office hour really help.”
- “She has well develop skills to teach, she has in mind what is the best way to students to understand the topics.”
- “Prakrati always explains everything clearly. Her step-by-step solution is my guidance. She also always knows which part of the course is important to pay more attention to.”