Teaching Statement

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1 Teaching Areas

Game Theory (any level), Microeconomic Theory (any level), an Intro to Analysis using Python (U), and a course in Computational Modeling in Python (detailed below).

2 Teaching and Mentorship Experience

As an instructor, I've taught two sections of Principles of Microeconomics (U) for which I developed and graded all course work and held office hours for. The syllabus I used for this course can be found **here**. I've also served as a Teaching Assistant for Macroeconomic Theory I (PhD) twice, Intro to Microeconomics (U) twice, and Agent-Based Policy Modeling (M/PhD) once. For the lattermost course, I also helped with the course's redesign, developing many of the assignments used to teach students both the basics of Python and the basics of computational modeling. I have also served as a department-hired tutor, tasked with assisting PhD students studying to retake their comprehensive exams - one summer for the Game Theory portion and one summer for Macroeconomic Theory I (focused primarily on dynamic optimization problems and value functions). To speak to my effectiveness as an instructor, perhaps no greater signal can be provided than the evaluations provided by students across many of these experiences, which can be found **here**.

I've also served as a mentor through my university's peer advising program for over two years, in which I was paired with a PhD student in a lower cohort to serve as an additional resource answer questions or give advice. We have regular check-ins (once every three weeks) during which we discuss goals, research progress, and overall well-being. I've found this immensely rewarding.

3 My Approach to Teaching

I was first inspired to pursue a PhD by the very enthusiastic instructor of my Intro to Micro course. It was during that class I came to realize two things. First, that **studying Economics can better enable us to engage with and have positive impacts on a number of important issues in the world**, many of which are latent in public discourse. And second, that **a single enthusiastic instructor or mentor can be pivotal in student education decisions**. Put another way, I believe that for many students, both their educational success and direction are fairly path dependent. I see myself as a steward, helping students to understand their potential, to develop skills to reach that potential, and to decide where to take their education next. So what does that look like in the context of the classroom?

I have fairly high expectations, in part because students need to feel challenged in order to grow. I require students at all levels of education to not only demonstrate an ability to apply a solution method or model, but also to explain the ideas underlying each component of the model or why each step of the method is executed. Given my training in computational modeling, I believe the beginning of many courses with theoretical models should contain a brief discussion on the purpose of models and what makes a 'good' model - something I incorporate into my own courses. Further, when a new model or concept is introduced, students should be challenged to think critically about if relevant underlying assumptions are reasonable or if any important factors are 'missing' from the model, and how that affects what the model can tell us in different contexts. This type of inquiry can reinforce basic concepts while developing a more nuanced ability to engage with these topics. This is essential not only for future economic researchers but for everyone, as many economic concepts are relevant to both how we participate in government to shape policy and the choices we make in daily life. This challenging of ideas can also serve as a segway

into discussions about real research conducted to address some of these deficiencies - a detour from the core content which I'm always happy to take and which gets some students excited.

To compensate for my high expectations, I provide a wealth of resources to my students. I typically teach using written notes (which I write in real-time for each class) on a doc-cam, all of which are scanned and shared digitally with students. This is particularly useful for students who miss a class or a definition. I post all answers to home works and exams and I set time aside regularly to address homework questions or exam questions at the beginning of lecture if so desired. I highly encourage students to work together on assignments, to study together, to ask questions during or after lecture, and to come to office hours if need be. If any student seems to be struggling, I reach out via email with the purposes of working through their hang-ups and setting up a plan to get them back on track. I want every student in my course to feel that they have all the resources they need to succeed.

Overall, I am an effective and well received instructor, as evidenced by both by the evaluations of my teaching performance spanning the many teaching roles I've played (found **here**) and by the numerous unique opportunities that have been extended to me: to teach as instructor of record, to help prepare PhD students for their comprehensive exams, and to design course material for a Masters/PhD level interest course.

4 A Course Proposal in Computational Modeling

If given the opportunity, I'd be delighted to teach a course in what is the focus of much of my research: Computational Modeling. This course would mirroring to some degree a course I served as Teaching Assistant for and developed a great deal of material for: *Agent-Based Policy Modeling (M/PhD)* at Binghamton University. During the first third of the course, students will be introduced the basics ideas in complex systems and computational modeling specifically while completing assignments to develop their proficiency in Python programming. In the second third of the course, students combine their knowledge of computational modeling basics and python to complete assignments building parts of computational models while we cover various relevant special topics in the lecture (e.g. optimization techniques, encoding decision rules, interaction rules / network structure, etc.). In the last third of the course, students will break up into groups to develop computational models to explore novel research questions. A description of the model and preliminary results should be submitted as a final project. Students will also give a brief presentation of their findings to the class. After course completion, students may choose to continue to develop their guided research projects for eventual publication.