Teaching Statement

Christopher Zosh

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1 Teaching Areas

Game Theory (any level), Microeconomic Theory (any level), and an interest course on Computational Modeling using Python (detailed below).

2 Teaching and Mentorship Experience

As an instructor, I have 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 have 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 was tasked with assisting in the course's redesign, developing many of the assignments used to teach students both the basics of Python and the basics of computational modeling - many of which are still used in the course today. I have also served the fairly unique role of 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 I have received from my students (found **here**).

I have also volunteered to serve as a mentor through my university's peer advising program for over two years now. I was paired with a PhD student in a lower cohort to serve as an additional resource, creating a low-cost way to ask questions or get advice from someone who likely has had similar questions and experiences fairly recently. We have regular check-ins (once every three weeks) during which we discuss goals, research progress, and overall well-being. I have found this immensely rewarding and aim to continue this mentorship.

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 aim for my students at all levels of education to not only demonstrate an ability to apply a solution method or model, but also to be able to explain some ideas underlying components of the model and why particular steps of certain solution methods are executed. Given my training in computational modeling, I also 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 by comparing what the model purports to describe to the real world, and how such differences affect what a 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 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 am always happy to take and which can be an exciting source of class participation and discussion for students.

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 want to compare their notes against my own of who miss a class. I post all answers to homework 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 really care about the success and well-being of my students, so I want every student in my course to feel that they have all the resources they need to succeed.

Overall, I am a compassionate and effective instructor, as evidenced by both by the evaluations of my teaching performance spanning the many teaching roles I have 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 would be delighted to teach a course in what is the focus of much of my research: Computational Modeling. This course would mirror 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 and could be taught at an undergraduate or graduate level. During the first third of the course, students will be introduced the basics ideas in computational modeling 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. A course such as this can provide students a taste of what engaging in novel research is like while helping them develop a skill (programming in Python) which is highly valuable both in academia and in the private sector.