

# Teaching Statement

Christopher Zosh

November 1, 2024

## 1 What I Teach

I would feel most comfortable teaching any **Micro Theory (all levels)** or **Game Theory (all levels)** courses, though I'm open to filling other course slots if it seems like it could be a good fit. Eventually I'd also love to teach a course on **Simulation and Behavior**. Mirroring a course I served as TA and developed course material for, *Agent-Based Policy Modelling (M/PhD)* at Binghamton University, the course would be broken into three parts. First, students are introduced to the basic ideas behind simulation and some applications in class while completing assignments to develop their proficiency in python programming. Next, students combine their knowledge of simulation basics and python basics to complete assignments on building simple agent-based 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 break up into groups and develop simulations of their own as a final project, which may incorporate elements of any number of the special topics we covered. After course completion, students may choose to continue to pursue the projects after as part of a potential publication.

## 2 My Teaching Philosophy

I was inspired to pursue a PhD by the instructor for my Intro to Micro course. It was my second semester of undergrad and up until that point, despite feeling motivated to do well, I was unsure where to take my education. My instructor was a passionate graduate student from another university who, over the course of the semester, I started to look up to quite a bit. They revealed to me how interesting Economics could be and soon enough I found myself thinking 'Why can't I do that?'

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. I really felt and still feel a calling to contribute to resolving some of these issues. And second, that **a single enthusiastic instructor or mentor can be pivotal in clarifying the path for a student**. I truly believe that for many students, their educational success and direction are both fairly path dependent. I want students to understand their potential and to help steward them in their education, whatever that may be.

## 3 How I Teach

Our goal as instructors should be to maximize our students' understanding of the subject matter in question and to help them decide if such subject matter is of interest to them for future pursuit. In addition, instructors also should play a role in promoting the well-being of our students. Perhaps unsurprisingly, in my experience, course structure and teaching style can play a big role in how well all of these goals can be achieved. Every student brings different resources with them (e.g. level of mastery over prerequisite material, support network quality/size, comfort participating, extroversion, note-taking skills, coping mechanisms for stress, etc.) and will face different challenges at different points of their education (on set by factors both within and outside academia).

In my view, the most important thing we as instructors can do for any fairly heterogeneous population of students (which face various asynchronous, random shocks to their ability to engage with the course) is to provide a course which is as flexible and accessible as can be without lowering what is expected academically from the students. While many courses employ policies which are designed to keep students doing reasonably well 'on-track', such policies can also serve to keep students who are behind 'off-track'.

These include graded attendance, restricting access of materials (e.g. lecture notes) to only those who attend lecture, and having highly weighted early course grades (e.g. Exams) which cannot be improved upon. I structure my undergraduate courses to be flexible in the sense that no student who is behind early in the course should feel like there is no longer an option to be successful. If our goal is to improve student outcomes, then one of the worst outcomes is for a student to become disillusioned and cease to engage with the material. This is precisely what happens when a student, half way through a course let's say, realizes they can no longer achieve a reasonable grade regardless of their effort level moving forward. While we must recognize the role the student has played in getting to that point, I believe this is in part the fault of the course structure itself. Instead, I think a course should be structured such that low performers can turn things around if they're willing to put in the ample work required to do so. Part of keeping the path to success open requires that the course is also accessible in the sense that students should feel as though they have a wealth of resources available to them and no students should be excluded from resources others have.

As a direct result, I have a number of policies I employ often which serve fairly well to create the positive environment detailed above. First, **I begin every course I teach by briefly covering the primary prerequisite information utilized in the course.** For example, for my Intro to Micro course, I began by reviewing graphing basics, finding the intersection of two lines, and a number of basic algebra rules. These notes were then made available for all students throughout the course. While many students are expected to have such material under their belt, having some basic review and a resources to look back to can only serve to set students up for success. I find it's most efficient to iron these issues out earlier rather than later. Further, while **I take attendance, I don't like to take it for a grade** (or at the very least, its impact on student grades is fairly trivial). Also, **I post lecture notes and problem set / exam solutions regularly**, which all students have access to. While the intention of policies which restrict resources or grade attendance are clearly to 'encourage' students to attend class, in my own experience, policies which withhold resources from or arbitrarily reduce the reported performance of a student (in the case of grading attendance) who has already not benefited from lecture only serves to further inhibit them. Such practices can make it very costly for a student who missed a lecture or two but is nonetheless motivated to get back on track to catch up to the current material. Further, I find particularly in introductory courses that many students are still learning how to take effective notes. For such students, posted notes can serve as an excellent supplement to their own. With regards to its affect on attendance, I believe that **it is our responsibility to demonstrate to students that the value of lecture goes beyond having access to notes.** Students not attending a course is never a great feeling for an instructor, but it does reveal something about how much overall students perceive attending lecture provides.

The greatest way to combat attendance issues is to get students interested and to address student questions clearly and thoughtfully. Lecture is an opportunity for students to feel engaged, to ask tailored questions about their particular hang-ups, and to get an introduction to topics which is likely softer and provides more intuition than simply reading from a textbook or a sheet of notes. **I prefer the format of writing the notes out by hand in real time** (displayed for students) as I feel it both **allows me to dynamically address questions (which I can write and post the answer to with the rest of my notes)** and it helps me keep a reasonable, consistent pace for traversing the material. That being said, writing notes in itself is not the most fun or engaging of activities. To facilitate a more interactive environment, **I regularly pause to assess the room, provide supplementary dialogue, and I either take questions or I encourage students to do so, aiming to make them feel more comfortable** to take advantage of those opportunities. In my experience, the occasional breaking of the typical format of lecture can also do wonders for student engagement. **Opening up a new topic for discussion intermittently before moving to the next part of the notes, fielding student ideas to help them discover or develop a topic we're covering** can create a feeling of mutual engagement. On occasion, **I've also started the class by having students break up into groups to work on a problem together which immediately got their minds working.** During the small game theory section I taught in my Intro course, I also had students break up into groups to play games with each other, which was very well received by the students.

There will always be students who prefer not to speak up during class if they need clarification or who's issues with a topic may run deep enough that they may feel some embarrassment around revealing what they don't know. To combat this, I also **strongly and consistently encourage students to ask me questions at the end of class, by email, or to stop by for office hours**, particularly if they're falling behind, **assuring them that regardless of how far they are behind, we can work it out** with some effort on their end. Such comments, while they may seem trivial, demonstrate that you

as the instructor do care about their success and can be pivotal in encouraging a student to get back on track. During my semester teaching a couple sections of Intro to Micro, I'd have seven or eight students in my office working together on various problems, helping each other out while I jumped around the room working with students who had questions which couldn't be answered by their peers. This format of **office hours also seemed to develop these students access to their peers by creating a second, more informal forum for them to work with each other and with me.**

Keeping in line with having a course structure which allows for a flexible learning path, I've also employed a fairly uncommon approach to how I structure my final exams. From what I've seen both as a student and as an instructor, a student's first exam grade can be pivotal in how they approach the rest of the course. Some students who receive a poor first grade can 'check-out' of the course as they realize this poor performance which constitutes a sizable portion of their grade is 'locked-in.' To combat this, during the semester I served as instructor, **I gave three exams which were each designed to be completed in a class period and which altogether cover the material I intended the students to master.** Students were informed that during finals week at the end of the semester, there would be no final exam. Rather, **students were given the option to retake any number of the three exams they took throughout the course,** and I would take the higher of the two grades. This **allowed students who performed poorly to on any of their exams throughout the semester to demonstrate how much their understanding has grown.** Of course, these exams were not precisely the same, but rather covered the same material. Students who performed poorly on any exam at any point during the semester had the incentive for the remainder of the course to engage with the material which they hadn't already mastered. Students who performed well consistently during the semester also reported they enjoyed the policy, as they could choose to retake none of the exams, freeing up time to focus on other exams they had that week. Ultimately I've really come to love this format as I think it **builds in a reasonably high degree of accommodation for students, encourages students to continue to work at the material they don't have a great grasp on, all without depreciating the high learning standards I have for them.**

I also believe I have fairly high standards for my students. In particular, in most theory courses I like to ask questions which go beyond remembering and regurgitating solution methods, aiming to probe at the level of intuition and understanding of the system in question and its components. Thus **students in my classes are required not only to develop a strong mathematical ability to solve the necessary problems for the course, but also an ability to describe why we perform such calculations and what the parts of the problem and the solution means.** Further, they will be asked to apply such knowledge to analyze problems in the real world. **I believe the grounding of course content in how it applies to the real world helps to demonstrate to students the relevance and importance of what they're learning and how they can apply such knowledge to problems they hear about on a daily basis.**

Overall, I think the success of this teaching strategy is best demonstrated in the comments left by students in my teaching evaluations for the various courses I have served either as a TA or instructor (available [here](#)). Taking a look through these evaluations, you'll see numerous students comment that they felt they had all the resources they needed to succeed, that I was available to help them, and that I cared about seeing them succeed. I've found immense joy in teaching over these past years and I'd love to continue to engage with students in the coming years.