Lecture 0: Introduction

- I'm Dan Quint, this Econ 711, first-year PhD theory
- I'm extemely excited to be back in an actual classroom with students for the first time in a year and a half
- I'm sure many of you are very excited to be here in person,
  and I'm sure many of you have other complicated feelings about today
- Even though this is supposed to be more or less "back to normal,"
  it may not initially feel like that, and that's fine
- Let me start off by saying...

1 Welcome to grad school, and welcome to the PhD program at the UW department of economics!

- I know it's an odd greeting,
  because not all of you are first-year Econ PhD students,
  but I say this for a couple of reasons
- First of all, to those of you who are entering our department,
  you are joining what I think is a pretty special community,
  and even if times are still a little strange right now,
  I want to recognize that and welcome you
- And second, for those of you who are not Econ PhD students –
  whether you're an undergrad, a master's student, or a PhD student in another department –
  I want to emphasize that you're choosing to take a PhD course,
  and that that has certain implications for the way I'm thinking about this class
- But first, I'll talk a little about logistics,
  then I'll loop back to what this means

2 Logistics

- So, let's talk logistics

- First, a very little bit about me
  - Who I am, what I do
- I'll teach until late October, Lones Smith will teach after that
- Semester grade will be based on average of score on each half

- TAs: Angela Jiang, Michael Nattinger
- Discussion sections will meet this week (tomorrow), although they'll be short meetings
- Office hours are on the syllabus –
  the TAs are offering both in-person and virtual (Zoom) office hours;
  I'm offering in-person, and am happy to add Zoom office hours by appointment

- I mentioned, semester grades are 50% my half, 50% Lones' half
- For my half of the semester: grade will be 50% homework, 50% exam
- Weekly homeworks, due online Monday nights at midnight
  (first one is NOT due this coming Monday, but the following one, September 20)
- I encourage you to work together on them, but write up your own answers –
  share ideas, don't copy text
- "final exam" for my half is **Thursday evening, November 4, from 8-10 p.m.**

- My half of the course will cover producer theory, consumer theory, and choice under uncertainty
  - We'll spend about six meetings on producer theory,
    then five or six on consumer theory,
    then two or three on choice under uncertainty,
    and then I'll hand you off to Lones

- Canvas site is up, will have everything you need
  - Homework will be posted online, submitted online
  - Extra readings will be posted there
  - I'll post my lecture notes after each class,
    and will sometimes post "bonus material" like proofs that I don't want to do in class

  - I'm recording lectures, since it's easy to do in this room,
    so if you need to miss a class or two, I can provide you with the video
  - I'm not yet sure whether I'll post them on Canvas,
    since I really don't want people to stop coming to class

3 Mental health

- At this point in class last year, I went on a fairly long digression on mental health
- The starting point: Bill Sandholm, a longtime professor in this department,
  a close colleague and good friend who used to co-teach this class,
  died by suicide just over a year ago
- Bill was a fairly private person; within the department,
  many of us who cared about Bill and valued his friendship,
  did not realize he had suffered from depression for many years

- More broadly, the last year and a half has been hard on a lot of people, in many different ways
- Grad school can be stressful and isolating,
  grad school during a pandemic even moreso
- Last year I was particularly worried about students' mental health,
  since people were stuck at home, sometimes alone, learning remotely
- I'm glad we're in person this year, and we're not all isolated in our homes,
  but getting back to in-person is going to be stressful and tricky in its own right
- So I want to say,
  if any of you find yourself feeling overwhelmed or depressed during this semester,
  please realize that you're not alone and there's no shame in feeling this way
- I hope you'll reach out to someone you feel you can talk to about it
- University Health Services has a variety of mental health resources available,
  all of them free for students, I've listed several on the syllabus
- If you're not sure who to talk to, you can talk to me
- Let's all please try to take of each other, and take care of ourselves, this year
- These are challenging times, let's all get through the coming year together

- (And also, I miss you, Bill.)

4 What a PhD class means

- Finally, I want to double back to what I said at the beginning –
  that this is a PhD class,
  and that means some specific things about how I'm thinking about it

- First, it means I believe you should worry less about your grade and more about learning
  - I'm sure you've heard that at various stages of your education,
    but now we really mean it.
  - Nobody cares about grad school grades –
    people care about the research you're able to produce,
    which depends on the skills you learn while you're here.
  - So seriously, don't worry about your grades – worry about learning!

  - (For those of you in the Econ PhD program, I mean this pretty literally,
    that your grades really aren't what matters;
    for those planning to apply to PhD programs in the future,
    I realize your grade in this class may matter quite a bit to you,
    I just want you to understand where I'm coming from.)

- As a corollary, this means "Will it be on the exam?" $\ll$ "Will it be useful one day?"
  - The point isn't to get an A in this class,
    the point is to learn and understand ideas and tools that will be useful going forward
  - Yes, of course, it's nice to know what to focus on when preparing for an exam,
    but if you're wondering whether something will be on the test,
    the glib answer is always going to be,
    "It's all on the test –
    and the test is your entire career as an economist"

- Similarly, in grad school, there's "no upper bound" on how you do in a class
  - In an undergrad class, if you got 100 on every assignment and every test,
    you probably felt you couldn't have done any better than that
  - But: goal of grad classes is to launch you into being a productive/successful researcher,
    so I can honestly say there's no upper bound on how much you get out of a class

  - Looking back, the "best I did" in a class in grad school was in a second-year IO class
  - I have no idea what my grade was in that class, and it doesn't matter at all
  - What matters is that we read some paper that made me wonder,
    "What would happen to these results if I changed this assumption?"
  - And I started playing around with it,
    and it led to my field paper,
    which wound up published in a third-tier journal several years later,
    but the idea was then the starting point for a paper I wrote after I arrived here,
    which wound up in *Econometrica* and had a huge impact on me getting tenure,
    and hopefully changed the way people think about a particular identification problem in auctions

  - So remember that in grad school,
    the best-case scenario isn't getting an A,
    or getting the highest score in the class on the final,
    it's getting exposed to ideas, and understanding them deeply, that help you succeed later
  - If you find something interesting, don't be satisfied with understanding it,
    see if there's a way to go deeper

  - (This is obviously more likely in a second-year class,
    where you're getting closer to the frontier of research –
    in here, we're mostly laying groundwork for work you'll do later,
    and most of the ideas in this class are well-understood and pretty well fleshed out –
    but it's still a good principle to have in the back of your mind.)

5 academic misconduct

- One final point about what it means that this is a PhD class:

  my attitude about academic misconduct, or cheating

- Some of you saw me in TA training a week ago,

  and I mentioned that cheating in undergrad classes is something that happens, and we deal with it,

  and I made it sound pretty run-of-the-mill

- That's not the case here

- This is a PhD course, and I expect you not to cheat,

  and if you do, it's a very big deal

- I'll explain my attitude about academic integrity, and why it makes sense,

  but the short version is this:

- If I catch you cheating in this class, I will destroy you

- Let me explain why I say that

- When I teach undergrads, I don't say anything like that, because it's not true –

  if I catch someone cheating in my undergrad class,

  it's a scared 20-year-old trying to get their GPA up to 2.0 GPA to graduate,

  and while I won't pretend it's OK,

  I also don't think the optimal response is to destroy this kid's life

- You all aren't undergrads
- (Most of you actually aren't;
  those who are, you're choosing to take a PhD class,
  so to me, you aren't)
- But more importantly, just about all of you are either already in a PhD program,
  or considering applying to one in the future,
  so you're all trying to become a part of academia –
  to become a productive researcher who generates new knowledge
- And academia really only works based on the integrity of individual researchers

- There's peer review, of course, which catches some mistakes,
  but there's always a chance for both errors and outright frauds to get through,
  and when that happens, it's a very real problem
- The most glaring examples have body counts –
  the fraudulent Lancet paper linking vaccines to autism led to decreases in vaccination rates,
  which led to increases in measles and mumps occurrances,
  which very literally led to more people dying
- But even the less dramatic examples have a significant cost –
  when you publish a false result,
  people believe it's true, so science takes a step backwards;
  eventually maybe it gets found out,
  but that means people devoted time to debunking it instead of something else;
  even then, people wind up less sure of what's true,
  and less confident in science overall

- Now, like I said, if you're taking this class, you're either in grad school already,
  or considering going to grad school in the future,
  so I assume you're very likely aspiring to academia
- If you succeed, there will always be pressure to generate new and interesting results –
  in grad school, there's pressure to write an exciting paper to get a job;
  in your first job, there's pressure to write exciting papers to get tenure;
  throughout your career, there's pressure to write exciting papers and do impactful research to get raises, better jobs, grants, and so on
- If I discover that you cheated in this class,
  I'll infer that you're the type of person who's willing to cheat when the stakes are high enough,
  meaning I'll assume you might be willing to fudge a proof, or falsify data,
  in order to write a better, more compelling paper that will publish better and advance your career
- Which means if you cheat in this class, I'll believe that academia is better off without you in it, and that the best thing for me to do is to keep you out
- Which brings me back to my earlier point:
  if I catch you cheating in this class, I'll destroy you,
  and I'll feel like a damn hero about it.

- So, with that as a pep talk, let's get on with it
- Any questions before we jump into producer theory?