### **Syllabus** Economics 410-1

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PLEASE INCLUDE 410-1 IN SUBJECT LINE OF ALL E-EMAILS.

Sections: There are **two** weekly sections where TAs will answer questions,

solve problem sets, and cover material as time permits and according to

your and their preferences.

Further course information (office hours, TAs, exam dates) will be posted separately on the web. Reading the Course Info document is very important! All schedule changes are tentative and subject to change.

Web: Course material will be located on blackboard (canvas.northwestern.edu).

Check the site regularly for announcements, which may include

corrections to notes and problem sets. Make a note of when you download material as when changes are made I will (usually) indicate when the

update was uploaded.

The text for the course is *Microeconomic Theory*, by MasColell, Whinston and Green, OUP (henceforth MWG, or mistakenly, GMW). Useful

additional texts include

- A Course in Microeconomics Theory, by David M. Kreps, PUP
- *Microeconomic Foundations I: Choice and Competitive Markets*, by David M. Kreps, PUP
- Microeconomic Analysis, by Varian, Norton
- Advanced Microeconomic Theory, by Philip R. Reny and Goeffery A. Jehle, Addison-Wesley (for some reason out of print in the Pearson US publishers site, but available from the UK site. This book is highly recommended).
- Lecture Notes in Microeconomic Theory: The Economic Agent, by Ariel Rubinstein, PUP (online versions available at PUP http://www.pupress.princeton.edu/rubinstein/ and at Rubinstein's website).

Two books that go far beyond what we will cover are

- The Economics of Risk and Time, by Gollier, MIT Press
- Notes on the Theory of Choice, by Kreps, Westview Press

The latter is a truly beautiful book in my opinion. We will not have time to delve into *Modeling Bounded Rationality*, by Rubinstein, MIT Press, available online at http://arielrubinstein.tau.ac.il/book-br.html, but it contains insightful perspectives related to some topics of this course.

Texts:

#### Material:

- MWG: Chapters 1-6, and in addition 20.B (with 3), 12.B (with 5), 21 and 17.C (with 4), 14 (pp. 485-6) and 8.B (with 6)
- Varian 8.5-8.8 (Chapters 1-11 often provide useful alternative perspectives on the material mentioned from MWG).
- Jehle-Reny 6.2. (Chapters 1-3 often provide useful alternative perspectives on the material mentioned from MWG).
- Class notes. (This is the main source (other than articles) for comparative statics and much of the material on uncertainty.)
- I also mention extra readings from time to time in the notes (or class).

A common concern is what material to study—the online notes, the texts or what I say in class. You may feel that you don't have time to read and study everything in all three. Obviously, what I cover in class is what I decided to emphasize and is the material you must understand. The material in the book and notes that is on exactly the same material as discussed in class complements the class and should help you understand it better (and correct any mistakes I make in class). Of course you should strive to go beyond what I cover in class, both because it will help you understand what I say and because it is useful—it is in the texts for a reason.

About notes:

The uploaded notes have mistakes. If you find any (even minor typos), *please* notify me. Even if you are unsure whether you are confused or it is a mistake please ask.

The notes change during the course as the staff (and you) discover items to add and correct. We try to indicate dates of changes and what changes are made so you don't have to print out multiple copies of all pages, but such changes are unavoidable.

The notes include sections that may not be covered in class due to time constraints, a decision to emphasize different issues, or just how the class proceeds.

Objective:

The course has several objectives.

It will introduce concepts and tools of importance for almost all economists (pure and applied theorists and empirical economists alike): choice theory, demand/production analysis, comparative statics, and uncertainty. We will critically consider some underpinnings of welfare analysis, which itself underlies most of economics. We will see some very elementary and classic examples of the economic methodology: simple models used to highlight basic economic effects.

The course covers a lot of material, and much of it is basic in the sense that it will help you study other models that are richer and closer to the current frontiers of research. It is nevertheless important to not only study the specifics and details we cover, but also begin your path as researchers: think critically about everything we do: are the assumptions reasonable, the models appropriate, the conclusions interesting, and the conceptual frameworks helpful or too restrictive?

The course is not a math course; I will try to give what I think are the basic economic intuitions behind results where such intuitions exist, but will not be spending much time going over proofs. You must learn how to read, understand and create proofs on your own.

Grading: Midterm (35%), final (45%), and (almost) weekly problem sets (20%).

> Work together and learn from one another. Form discussion groups. But attempt all problems on your own, and make sure you understand the help that your colleagues give you.

Problem sets: You may work on problem sets in groups. Each group only need submit one problem set, with the names of all group numbers listed alphabetically by last name. Grading is based primarily on effort (although also on success), so show your work.

> Sometimes problem sets may be hard to understand or have mistakes. Occasionally they are hard to understand because part of the work is in understanding how to make an incomplete idea into a complete one. But if you find it too confusing and certainly if you find any mistakes please contact the TAs or instructor so we can post corrections and/or clarifications online.

Sometimes problem sets may be too long; it is often hard for me to judge what may take a long time. If you think a problem set is unreasonably long please let me know right away, so I can decide whether to make some parts optional or to serve as review for later.

If you feel the need for more problems for study later then the books are a useful source for additional problems.

I welcome feedback and constructive criticism.

It is most valuable to you if you provide it during the course so I can make use of it. Please provide feedback about the pace—whether I am going too slow or fast. I will not necessarily be able to respond to your requests and suggestions, but it is helpful to be aware of your perspective.

Advice:

Request:

### Approximate schedule:

I list the number of weeks per topic, and order of topics below. The list is approximate and changes may occur both in time and order (e.g., I might move comparative statics to be after production and spend less time on it).

Choice theory: 1.5 week Consumer choice: 1 week Demand theory: 2 weeks (Aggregation: ~ 0 weeks) Production: 1 week

Comparative statics: 2 weeks

Uncertainty: 2.5 weeks

### Copyright and recording:

<u>Recording by the Instructor</u>: This class or portions of this class will be recorded by the instructor for educational purposes. These recordings will be shared only with students enrolled in the course in Canvas and will be deleted at the end of the quarter.

Note that this applies to recording of synchronous class components and not to pre-recorded lectures by the instructor and not featuring student contributions.

<u>Recording by Students</u>: Unauthorized student recording of classroom or other academic activities (including office hours) is prohibited. Unauthorized recording is unethical and may also be a violation of University policy and state law. Students requesting the use of assistive technology as an accommodation should contact <u>AccessibleNU</u>.

<u>Copyright of Class Materials and Recordings</u>: Unauthorized use of classroom recordings – including distributing or posting them – is also prohibited. Under the University's <u>Copyright Policy</u>, faculty own the copyright to instructional materials – including those resources created specifically for the purposes of instruction, such as syllabi, lectures and lecture notes, and presentations. Students cannot copy, reproduce, display, or distribute these materials. Students who engage in unauthorized recording, unauthorized use of a recording, or unauthorized distribution of instructional materials will be referred to the appropriate University office for follow-up.

(https://www.northwestern.edu/provost/policies/recording-class.html)

### General information and campus resources:

Accessibility (Evanston Campus): Any student requesting accommodations related to a disability or other condition is required to register with AccessibleNU (accessiblenu@northwestern.edu; 847-467-5530) and provide professors with an accommodation notification from AccessibleNU, preferably within the first two weeks of class. All information will remain confidential.

<u>Sexual Misconduct and Reporting:</u> Northwestern University is committed to fostering an environment where students are safe and free from sexual misconduct. <u>Confidential resources</u> are available to those who have experienced sexual misconduct. Faculty, instructors, and TAs are not confidential resources and are required to report incidents of sexual misconduct, whether discussed in your assignments or in person, to the Office of Equity, which can provide information about resources and options. I encourage students who have experienced sexual misconduct to talk with someone to get support. For more information, including how to request interim protective measures and academic accommodations or file a complaint, see <u>the Get Help page</u>.

Discrimination and Sexual Harassment: Northwestern University's Policies on Discrimination, Harassment, and Sexual Misconduct apply to all members of the University community, including students, staff, faculty, and third parties. Any student, staff, or faculty member, or third party, who believes that they have been discriminated against or harassed on the basis of their race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, pregnancy, parental status, marital status, age, disability, citizenship, veteran status, genetic information or any other classification protected by law, should contact the Office of Equity at (847) 467-6571. Additional information about the University's discrimination and harassment policies, including the campus resources available to assist individuals with discrimination or harassment concerns, is available online on the Office of Equity website. Students, staff, and faculty who report harassment, discrimination, or sexual misconduct are also protected under the University's Policy on Non-Retaliation

# Economics 410-1

## **Course Information**

## Fall 2020

Class	Location:	KGH1410 (&Zoom)
	Time:	Mon&Wed 9-10:50am
Emails	Eddie	dekel@northwestern.edu
	Udayan	udayanv@u.northwestern.edu
	Jingyuan	jingyuanwang@u.northwestern.edu
Office hours	Eddie	Wed 11:00 - 12:00, KGH1410 (Zoom)
		No OH on Oct 14
	Udayan	Tue 11:00am - 1:00 pm, Zoom
	Jingyuan	Wed 3:30pm - 5:30pm, Zoom
	Udayan	(Problem Session) Mon 3:30-5:20pm, Zoom
Discussion sections	Jingyuan	(Review Session) Fri 3:30-5:20pm, Zoom
Kvetching	Eddie	(Sign up) 12-12:20 or 12:25-12:45
Problem sets	PS are given most weeks and are often due on Mondays at 11:59pm.	
	Submit solutions on Canvas or to TA Mailboxes (not to Eddie)	
Midterm	Wednesday, October 21, 9-11AM, Zoom	
Final	Monday, December 7, 3-5PM, Zoom	
	(In case of conflict between this time and that given by the registrar's office, the registrar is right and this is wrong.)	
Zoom	<b>Important:</b> Please read the information on the following page Password: 410-1	
In-Person Class (optional)	We will alternate the days in which each student can attend class  More info to be posted later today (Sept 15)	
Schedule Changes	<sup>†</sup> First week: lecture on Fri Sept 18 instead of section; Mon group can attend in person	

<sup>\*</sup>all schedule changes are tentative and subject to change

## 2020 Special COVID-19 and Zoom-Related Info

Note: We will post MORE INFORMATION about the Monday-Wednesday seating allocation TODAY (Sept 15). We apologize for the delay which was caused by issues outside our control with the registration.

### PLEASE READ THIS CAREFULLY

This is hard for us all, students, faculty and TAs. We're all doing our best. Please be understanding. Feel free to make requests for improvements, and please understand I might not be able to accommodate all such requests even though I do want to hear them and will try if I can. Similarly, please do your best to accommodate my requests.

There are detailed notes (with typos) on almost all material covered. ("Almost all" because I sometimes add something in response to questions.) I recommend having the notes accessible while in class (either physically or via zoom) so you can mark them up if you want.

**Zoom lectures will be recorded**. You should be able to access them under the "Recordings" tab under the Zoom section on Canvas. So, in terms of taking notes, you will have both that and my notes and the books. Therefore, note-taking is more for staying involved and adding subtleties or clarifying specific confusing issues than recording all the material. Take that into account in deciding how much attention to give to note-taking vs listening and participating.

I am hoping to use the whiteboard. That's how I always teach, because it helps me keep a less rapid pace when I write most of what I expect you to absorb. There is technology that still needs to be installed for that to work with zoom and I'll only have at most a short initial attempt to use it a few days before classes start. So, the first few classes will be an experiment to see how well it works. If it fails we'll switch; in that case I'll need to prepare slides for presentations and/or use my iPad for writing. Again – we'll have to see how it goes and adjust. The slides will be a subset of my notes.

I expect teaching will be much slower than usual. We'll just have to give up on some material. We'll see what and how much as the term goes on.

The class is hybrid, meaning some portion (I expect between 1/3 and 1/2) of students will be in class alternating between Mon and Wed, and the remainder are not coming in person on either day and will be only on zoom. While that requires teaching - and for those in class studying - with a mask I am hoping that cost will be more than compensated for by the in-person (socially distant) teaching experience. More on the Mon-Wed switch subsequently.

I respect and understand those on zoom who are not using video, but I do ask that if at all possible you have the video on. It will dramatically improve my ability to monitor faces to see how the class is going, and also make it more pleasant and human and interactive for everyone. In any case please put your full name (as in your Northwestern listing) in your zoom.

We will need to experiment with how questions are asked. I'd like to initially try that those on zoom simply speak up when they have a question. Those in class can raise their hand as usual or can also just speak up. While I will stop at times for questions, and I often stop and ask if something is clear, I strongly urge you to ask questions and stop me or slow me down as needed. When I ask if

something was clear (or previously known) I'll ask for a show of hands; on zoom you can use the raise-hand feature (or raise it if your video is on). I emphasize: **If you have a question you are not alone – by asking you are helping yourself and others**. Please do so. No question will make me think poorly of you! Moreover, you are kindly giving a gift to your colleagues (even if sometimes they don't know it).

My handwriting is bad. Please don't hesitate to ask for clarification.

The password for zoom is 410-1. If we are zoom-bombed I'll change to something more challenging.

I intend to have OH right after class on (most but not all) Wednesdays in the classroom and via zoom, just as the class is taught. To enable all those coming to class to have the option of in-person OH, we will implement a method that alternates the days on which each student is allowed to attend. It will be some variant of the following: on the first week, each student is assigned to either Monday or Wednesday. On each following week, the groups will switch (so those who came Wed on the first week come Mon, and vice-a-versa). We will post MORE INFORMATION about this Monday-Wednesday allocation TODAY (Sept 15).

I'll also discuss "kvetching" hours (look it up if you have to:)); I'll explain that in class. Depending on interest I might also have meditation hours; we'll discuss that too.

Finally: please bear with me. I am trying to cope just as you are.