

Syllabus

Microeconomic Theory I: Choice and Decisions. Fall 2008.

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The lecture part of this class meets from 10:00-11:30 am on Tuesdays and Thursdays, as listed in the course catalog. This lecture is a 3 credit-hour class, listed as Econ 6342 (Microeconomic Theory I), and is held in McElhinney Hall room 118. In addition, however, you will have a mandatory 3-hour “lab session” once a week—Fridays from 8:30 am to 11:30 am, in McElhinney Hall room 212 (the Econ conference room).

Most of the Friday lab sessions will be for covering homework assignments with my TA (to be announced): Those sessions will begin at 10 am and run to 11:30 am. When due, homework is due at 10:00 am on Tuesday mornings, to be handed in to me at the start of my Tuesday morning lecture. This gives the TA three days to get a sense of which questions you had the most trouble with, and in what ways, in preparation for the coming lab session on the following Friday (where the TA covers the homework). Do not ask either the TA or me to distribute printed homework answers: You only receive homework answers in lab sessions (this is for several different reasons which I will detail on the first day of class).

In some lab sessions, homework will not be due. On two of those occasions, you will instead have your mid-term exam (Friday, October 10th) and end-of-term exam (Friday, December 5th, your last day of class). Please note these exam times now: whatever else you do, you **MUST** be available for all three hours (8:30 am to 11:30 am) of the lab session on those two dates. If there is no exam and no homework is covered, I will give a lecture during the lab session, from 10 am to 11:30 am.

Purpose of course

We will cover the basic mainstream theories of choice and decision making (rational ones, though I will say things here and there about their descriptive problems) used in most of professional microeconomics, as well as various topics derived from, and adjunct to, those theories, such as surplus measures and index numbers, extra properties of special classes of preferences and production functions, axiomatic approaches to preference, choice under uncertainty and aggregation of preferences. However, this course also introduces you to many economic theory methods such as optimization, constrained optimization, the Kuhn-Tucker theorem and associated theorems and results related to them. These methods are mostly mathematical--not graphical as they probably were in your undergraduate economics classes. This class is also in part an “applied mathematical boot camp” that takes you from the graphical to the mathematical techniques.

Structure of the class

The major requirement in this class is homework: It constitutes 40 percent of your grade. This is why so much of your in-class time is devoted to problem-solving (during the Friday lab session). Your homework assignments will be downloadable from my webpage: You are responsible for downloading and printing them yourself: Go to this website and follow the link for this class:

<http://www.class.uh.edu/econ/faculty/nwilcox/>

Homework is due at 10 am on Tuesdays, at the beginning of my Tuesday lecture. No late homework will be accepted—**NO EXCEPTIONS FOR ANY REASON**. Homework is graded on a five point scale. A “five” means the work is as good as I could fairly expect (“five” can be awarded even if you have a couple of minor screw-ups). A “four” is good, a “three” just satisfactory, and a “one” is unacceptable. Your two lowest homework grades (that includes any homework you fail to turn in on time, for which you receive a

zero) will be dropped for the purpose of calculating your final grade in the class. Due dates will be clear from lectures.

The midterm and end-of-term exam (dates above) each count as 30 percent of your grade. Notice in particular that you have NO “final exam” during the university’s formal “final exam period” that follows the last day of classes.

Required and recommended reading

The only required text for this class is Deaton and Muellbauer's Economics and Consumer Behavior, which is available at the campus bookstore. It contains most of the heart of this class in its first half dozen or so chapters. Be forewarned: Although you are welcome to use whatever other graduate texts you may own as supporting material, YOU are responsible for any discrepancies between the content of your textbook and the one I require, that is, Deaton and Muellbauer. Example: Deaton and Muellbauer on the one hand, and Mas-Colell, Whinston and Green on the other, give different lists of the properties of Marshallian demand functions in their main text. On my exams, if I request you to know such a list, I mean the Deaton and Muellbauer list, not the Mas-Colell et al. list. So, if you use the Mas-Colell et al. list to answer one of my exam questions, and it differs from Deaton and Muellbauer’s list, your answer is, for the purpose of my grading, WRONG (I will explain to you in a lecture why it is that even very distinguished people like Deaton on the one hand and Mas-Colell on the other can give different lists and both be right from their own peculiar perspectives).

I also recommend any the following books for special purposes, but none is required:

Silberberg and Suen. 2000. The Structure of Economics: A Mathematical Analysis. New York: Irwin/McGraw Hill.

Henderson, James and Richard Quandt. 1980. Microeconomic Theory: A Mathematical Approach, 3rd ed. New York: McGraw-Hill.

Kreps, David M. 1990. A Course in Microeconomic Theory. Princeton: Princeton University Press.

Mas-Colell, A., M. Whinston, and J. Green. 1995. Microeconomic Theory. New York, NY: Oxford University Press.

Nicholson, Walter. Various (get a cheap used edition online somewhere, anything after the fifth edition or so). Microeconomic Theory: Basic Principles and Extensions, any edition. New York: Harcourt Brace.

Varian, Hal. 1992. Microeconomic Analysis, 3rd ed. New York: Norton.

If you prefer that math be done at a higher level of notational abstraction than I use, Varian or Mas-Colell et al. are decent. Henderson and Quandt is an excellent complement to my class—especially for problem-solving help and its outstanding mathematical appendix—but, unfortunately, it has passed out of print. Kreps is a very good reference book for your graduate years and beyond—Kreps being one of the primary makers and users of modern game theory. The Nicholson book is at a lower level of mathematical difficulty than any of these books, is very wordy and has lots of graphs. It is a good “bridge” between undergraduate level texts and graduate level texts. For those of you who have good undergraduate level intuition, but are having trouble connecting it to the mathematical treatments in your required texts, Nicholson will be the best help I can recommend, followed closely by Henderson and Quandt and/or Silberberg and Suen for help with mathematical details. You can find used, old editions online very cheap. Silberberg and Suen goes over the mathematics of constrained optimization and comparative statics in great detail: For those of you who like

to see everything written out expansively (rather than the opposite, highly compact approach of Varian), this book is quite helpful.

Outline of course topics

There are no dates on this outline because I am unsure how long it will take us to cover each of these topics. However, the following list contains references to Deaton and Muellbauer's book where relevant, and lists general topics roughly in the order we will study them. A guess is made as to the time we will spend on each of these topics, but remember that it is a guess. In all cases, a quick glance at Deaton and Muellbauer's index, after looking at a problem set that has been assigned, will tell you where you should be in readings most of the time.

1. Basic Introduction: Mathematizing Supply and Demand Equilibrium (1 week). No readings, self-contained in lectures and homework (1 week).
2. Basic Introduction to Comparative Statics (1 week). No readings, self-contained in lectures and homework. (1 week).
3. Firm Choices and Consumer Choices (5 to 6 weeks). Deaton and Muellbauer as follows: Chapter 1 (all), Chapter 2 (all but section 2.1), Chapter 3 (all), Chapter 5 (sections 5.1, 5.3 and 5.4) and Chapter 7 (sections 7.1 and 7.4).
4. Decision Theory (3 to 4 weeks). Deaton and Muellbauer as follows: Chapter 2 (just section 2.1) and Chapter 14 (sections 14.2, 14.3 and 14.5). Papers by Schoemaker and Machina; and short reading from Krantz et al. (the last three will be made available to you later).
5. Aggregation (1 week). Deaton and Muellbauer as follows: re-read Chapter 5 (section 5.4) and read Chapter 6 (sections 6.1 and 6.3).
6. Kuhn-Tucker Theorem (1 week). No readings except perhaps handouts from me which I will make available later.

A word on notation

Every economist chooses their own notation for doing mathematical work--THERE IS NO STANDARD NOTATION. The notation I choose to use in lectures will sometimes be like Silberberg's and at other times my own. Unfortunately, Deaton and Muellbauer's book uses an entirely different, idiosyncratic notation, but I'll keep you informed about the differences between my usual notation and theirs. You must also get used to the fact that different economists choose different notations. This will be a little confusing at first, but you'll get used to it. You must learn to absorb each author's notational definitions as they give them--defining terms and notation at the outset of an economic paper is completely conventional in the field.

This is an appropriate place to mention some strategies for doing your homework correctly, as well as warnings about what is forbidden (and ultimately very short-sighted). Let me give a short list.

(1) I am fairly careful to provide, within each homework problem, all of the notation needed to do the problem. For instance, if you need symbols for prices to solve some homework problem, I'll give them to you in the statement of the problem. Conversely, if I don't give you symbols for prices, you are probably confused about the problem if you think you need to make up such symbols.

(2) Expanding on the last hint, I try to be very specific in the setup of every homework problem about the concepts and things I want you to pay attention to. If I don't mention something, I generally don't mean for you to consider it. Stick to what's asked for, and what you are given in the statement of a problem.

(3) I encourage you to work in groups. If you DO work in a group, I will accept a group problem set from up to three people. That is, if you are working in a group of no more than three people, that group may turn in a single problem set, with each member's name at the top. In fact I encourage this, since it makes grading much easier, and more uniform, for the TA! Moreover, we deliberately load you down with a lot of work during your first year: Partly, we mean to FORCE you to work in groups. Success in this program REQUIRES collaboration: The surest predictor of failure in our program is working alone. You've been warned.

(4) Look in the required and recommended readings for similar problems. They may not use the same notation, or describe the problem in precisely the same way; but frequently you will discover something very similar to, or even identical to, what I am asking you to do for me.

(5) You are welcome to seek help with understanding anything in this class from other graduate students and you are welcome to try and get hints from them when you are stuck on problems. This includes both your fellow first-year students AND students who have already taken this class. However, you are cheating if you actually get written or printed answers (or any sort of physical or electronic copy of those answers) to my homework problems from grad students who have taken my course in the past, and you are guilty of plagiarism if you copy those answers and hand them in as your own homework. If I discover you have done this, I will do my best to formally charge you with cheating and/or plagiarism. For exact descriptions of these violations of academic honesty, see section 3.02, subheadings d and h, at:

<http://www.uh.edu/dos/hdbk/acad/achonpol.html> (this is UH's online academic honesty code).

I hereby inform you that you are responsible for knowing these parts of the code: That is, "I didn't know that" is NOT a legitimate excuse for violating the code. Let's just put it this way: If anyone offers to show you or give you anyone's answers to my homework problems from previous years, JUST SAY NO. Also, notice that according to section 3.02, subheading k, you are in violation of the University's academic honesty principles if you fail to report to me any cheating and/or plagiarism by other students.

The problem sets are designed to build skill at setting up, and solving, economic problems. It is like learning to play the piano: You improve at it by actually playing the damn thing, not by watching a film of other people doing it. If you cheat by using other people's old homework answers, you will simply be that much worse prepared for the comps next summer. The comp questions are always deliberately new and somewhat different from anything you see during the year, so you need the problem-solving skill. In the long run, no one in this department cares whether you got an A or a B+ or a B- in my class: They care first whether you have been admitted to Ph.D. candidacy by passing the comps, and in the end whether you have interesting research ideas and work obsessively on them (after you pass the comps). Therefore, aside from the issue of academic honesty, **YOU ARE A SHORT-SIGHTED FOOL IF YOU CHEAT ON MY HOMEWORK**. It's your move.