

ECONOMICS 101A – FALL 2003 MICROECONOMIC THEORY

SYLLABUS (08/26/03)

This course is meant to introduce you to the world of formal economic modeling. Economic models are typically made of three components:

- Consumers;
- Firms;
- A market in which consumers and firms interact.

We deal with these three components sequentially. The course starts by introducing consumer preferences and utility function. We then move on to consider firms and production functions, and finally we study the market-clearing conditions.

The organizational details:

Course Time: Tuesdays and Thursdays, 11.00-12.30 in 60 Evans

Teacher: Stefano DellaVigna, 515 Evans, sdellavi@econ.berkeley.edu
OH: Tu, 1.00-2.00 PM, W, 11-12 in 515 Evans (These may change)

GSI: Ethan Kaplan, kaplan@econ.berkeley.edu
OH: To be announced.

Webpage: http://emlab.berkeley.edu/users/webfac/dellavigna/e101a_f03/101AF03.shtml
You may also want to refer to last year's 101A webpage:
http://emlab.berkeley.edu/users/webfac/dellavigna/e101a_f02/e101a.html

Textbook:
Walter Nicholson, *Microeconomic Theory – 8th Edition*, Southwestern Editors

Course grading:
30% 6 (or 7) Problem Sets
20% Midterm 1
20% Midterm 2
40% Final Exam (F 12/12/03, 5.00-8.00pm)

The percentages above sum to 110%. The worst 10% of the score will not count toward your grades. For example, if the worst score is on the problem sets, the problem sets will only have 20% of weight. There is a second bonus. Class participation can increase the score by at most one grade; for example, from B to B+.

Miscellaneous questions:

1. Are problem sets required?
Yes, problem sets are an integral part of the course. As you can notice, problem sets are also an important part of the grade. There will be a problem set handed out about every other week.
2. How important is attending class and reading the book?

You will really need to do both! The book unfortunately is not as close to the lectures as I would like it to be, so it definitely is not a substitute for attending class. I searched extensively for a better book, but could not find it. Coming to the lectures is very important. I will distribute handouts of my slides during class to help you take better notes and will post them afterwards on the web with corrections in case there were some mistakes. However, the handouts are not comprehensive: they do not include graphs and go quickly over certain topics that the book covers in more detail. Therefore, I think that you will find the book a useful complement to the classes. Day-by-day, I will indicate which pages in the book you are responsible for. You should feel free of course to read more!

3. Is it ok if I hand in the problems sets late?

Unfortunately, it is not ok. Ethan (the GSI) will not be able to accept problem sets turned in late. With a class this size we cannot do exceptions. Sorry.

4. Can I work on the problem sets with other people?

Yes, you can and should. I strongly recommend that you form study groups with other people. In fact, one of the strongest reasons why we require problem sets is precisely the fact that you get to work on economics problems with other people, you discuss with them, and learn from the intuition of others. Nevertheless, we expect that you will write and turn in your own solution to the problem set. After you discuss with other people, you should make sure that you can write your own solution.

5. How do I know which questions are hard in the problem set?

We try to give you an idea of that by the points assigned to the different exercises. More means harder. In any case, expect to work hard in order to be able to solve the exercises. But do not get frustrated. It is normal if you find the exercises hard! If you can only get half of an exercise done, just write that part done. This way you can get partial credit. Afterwards, by reading the solution to the problem set, you will pick up the rest.

6. How do I choose between this class and 100A?

The answer depends on two things: your mathematical background and your interest in economics. As for the first, this course requires a more thorough knowledge of mathematical tools than 100A does. You are supposed to be comfortable with derivatives and integrals, since we are using them throughout the course. To give an example, you should know the difference between a total and a partial derivative.

To succeed in this course, though, you will need more than just a knowledge of mathematics. I expect anyone who takes the class to be seriously interested in microeconomics, in writing simple models of the world. I will try throughout the course to give intuition and to stress the economic significance to the results we cover.

If you do not feel comfortable with your mathematical background, but you have a strong interest for economics, you may still want to take this class. You should then be prepared to work very hard.

If you neither have a strong mathematical background, nor a strong interest in microeconomics, I do not recommend that you take this course.

7. What if I disagree about the grading of an exam?

If we have miscounted points on the midterms or final, tell us immediately and we will correct. If you think that we have inappropriately scored an answer submit a complaint in writing (typed) to me. I will then regrade your test from beginning to end. You

should keep in mind that this may decrease your final grade, but still you should feel free to submit complaints.

8. Who should I talk to if I have a question?

The GSI should be your primary contact for questions related to the problem sets or the exams. Ethan will hold regular office hours at a time he will announce. If you would like to talk to me, I am delighted to meet with you during my office hours. In particular, I am happy to discuss issues of economic substance, questions inspired by the lectures, and suggestions for your future studies. So, if a class made you wonder why consumers do things that they regret *ex post* (such as not exercising), or why the price of airline tickets varies so widely, I am more than happy to discuss issues like these with you. In general, feel free to come see me during office hours.

9. I would like to talk to the Professor in a more informal setting. Is it possible?

Yes, it is. After class, each Tuesday and Thursday I will be heading toward Hearst Ave. to get a sandwich. I encourage groups of 2-4 students to join me to grab a sandwich and chat before I (we) head back to Evans for my office hours at 1pm. My treat!

10. I am not able to take exams in the normal time because of disability. What should I do?

Definitely, come talk to me. You will need to provide some documentation, and we will arrange a suitable accommodation.

11. What should I expect to learn from this course?

I would like you to be able to face a real world phenomenon/puzzle and be able to write down a sensible economic model of it. This will enable you to analyze more problems than you can imagine, ranging from economics to political science, from psychology to sociology. Perhaps, by the end of the course you will agree with me that microeconomics provides a parsimonious and insightful way to look at the world. That's my aspiration, and I will do my best to get you to share my enthusiasm for economics!

Here is a preliminary schedule of topics to be covered in class. I anticipate that there will be a few changes to this schedule over time. I will distribute updated lists of topics covered as time goes on, and certainly before before the exams. The chapter numbers refer to the Nicholson book.

Basics

Lecture 1 (August 26).

Introduction

Maximization in One Variable (Ch. 2)

Lecture 2 (August 28).

Maximization in Several Variables (Ch. 2)

Comparative Statics

Problem Set 1 posted on web

Lecture 3 (September 2).

Concavity and convexity

Constrained Maximization (Ch.2)

Consumers

Lecture 4 (September 4).
Constrained Maximization (Ch.2), continued
Preferences and Utility (Ch. 3)

Lecture 5 (September 9).
Preferences and Utility (Ch. 3)
Common Utility Functions
Problem Set 1 due in class

Lecture 6 (September 11).
Utility Maximization and Choice (Ch. 4)

Lecture 7 (September 16).
Utility Maximization and Choice (Ch. 4)
Indirect Utility Function
Comparative statics
Problem Set 2 posted on web

Lecture 8 (September 18).
Expenditure Minimization
Slutsky Equation

Lecture 9 (September 23).
Income and Substitution Effects (Ch. 5)
Giffen Goods
Problem Set 2 due in class

Lecture 10 (September 25).
Labor Supply
Intertemporal Choice
Economics of Altruism

No lecture (September 30).
1st Midterm

Lecture 11 (October 2).
Choice under uncertainty (Ch. 8)
Introduction to Probability
Expected Utility
Problem Set 3 posted on web

Lecture 12 (October 8).
Risk Aversion
Insurance
Investment in Risky Asset

Lecture 13 (October 10).
Time consistency (and not)
Application to health clubs

Producers

Lecture 14 (October 14).

Production Functions (Ch. 11)
Isoquants
Returns to Scale
Problem Set 3 due in class

Lecture 15 (October 16).

Costs (Ch. 12)
Cost Minimization

Lecture 16 (October 21).

Total, Average, Marginal Costs
Supply Function
Short-run and long-run costs
Problem Set 4 posted on web

Lecture 17 (October 23).

Profit Maximization (Ch. 13)
Perfect Competition

Lecture 18 (October 28).

Aggregation
Market Equilibrium (Ch. 14)
Taxes

Lecture 19 (October 30).

Long-run Market Equilibrium
Problem Set 4 due in class

No lecture (November 4).

2nd Midterm

Market Interaction

Lecture 20 (November 6).

Welfare
Monopoly (Ch. 18)
Problem Set 5 posted on web

No lecture (November 11). Veterans Day Holiday

Lecture 21 (November 13).

Price Discrimination
Game theory

Lecture 22 (November 18).

Game Theory

Lecture 23 (November 20).

Game Theory
Oligopoly
Game Theory and Oligopoly
Bertrand vs. Cournot competition

Lecture 24 (November 25).

Market failures
Coase Theorem
Problem Set 5 due in class

No lecture on November 27 – Thanksgiving Holiday!

Lecture 25 (December 2).

Externalities (Ch. 24)
Public goods
Application: The problem of the common resources
Problem Set 6 posted on web

Lecture 26 (December 4) – Last lecture!

Review

Problem Set 6 due on December 9

Final exam (December 12, 5.00-8.00PM)