

Econ 612: Microeconomics

Professor: Mark Koyama

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Tuesday: 7.20-10.00 pm

Office Hrs Mercatus Center Arlington Campus (4015): Tuesdays 4.30pm - 5.30pm
or by appointment.

Course Description

This course is an introduction to microeconomic theory at the graduate level. It presumes that students have taken both Econ 611 and Mathematical Economics (Econ 630).

The purpose of this course is to introduce students to microeconomic theory. We will focus on formal models of decision making, consumer and producer behavior, oligopoly theory, game theory, and asymmetric information. We will also touch upon some topics in behavioral economics. The emphasis of this class will be on understanding the underlying economic concepts and tools of analysis.

Assessment will be based on two exams involving a combination of mathematical problem sets and essay-style questions. I assume that you are all comfortable with using calculus to solve economic problems.

This syllabus is provisional. Changes may be made before the semester begins and over the course of the semester.

1 Textbooks

There is no single textbook at the right level for a masters in economics; this is why I am planning on teaching from a range of textbooks. The most useful ones for you will be:

- Hal R. Varian, *Microeconomic Analysis*, 3rd edition New York: Norton, 1992 for consumer theory, producer theory, general equilibrium, monopoly, and competition.
- Avinash Dixit, D Reiley and S Skeath, *Games of Strategy* New York: W.W. Norton & Company, 2010* for the game theory material (I have not had a chance to review the 2015 edition. We won't use this book till the second half of the semester so you don't need to buy this till then).

For the first part of the course, I will cover material that is covered well in both graduate level and advanced undergraduate textbooks. I recommend Varian, *Microeconomic Analysis* as a graduate text. However, it is also rather dense and mathematical and it goes into too much detail on several topics. To complete it my other recommendation is Hal R. Varian, *Intermediate Microeconomics* New York: Norton, 1999 (any edition of this is fine, I use the fifth edition because that is the

copy I own). This book is an undergraduate textbook and hence a little basic for your purposes. However, if there is any material that you do not understand in the above textbooks this should be your first port of call. Similarly, please feel free to use any textbook you used as an undergraduate. They all cover similar material. I will endeavor to scan and upload all other material that you need onto Dropbox.

There are many good books on game theory. I highly recommend that you purchase Avinash Dixit, D Reiley and S Skeath, *Games of Strategy* New York: W.W. Norton & Company, 2010. It is the most accessible and comprehensive game theory book and it has a lot of good problem sets. There will be other less technical material that I will assign you. These additional readings will all be made available on Dropbox.

I have uploaded an undergraduate handbook in mathematical economics onto Dropbox. You will find it useful in both understanding the material, answering problem sets and writing exams.

2 Exams and Assessment

Your grade in class will be based on a midterm and a final.

- Midterm: March 22nd.
- Final: May TBA (it will be on the official exam date between May 4th and May 11).

The way to do well in this class is to practice the problem sets. I will give plenty of practice questions for you to work on before both the midterm and the final. Attendance is compulsory. If you miss a class it is your responsibility to catchup on the material.

There will be a series of take-home problem sets which will allow you to practice for the mid-term and final. The assessment will be based on mathematical problem and short essay answers. My lecture slides will be available on the dropbox link.

3 Course Outline & Readings

Please note that the date of class has been switched (with Macro) on a Thursday to accommodate academic conferences and presentations.

Starred readings contain information that will be especially useful in the midterm and final. None-starred readings are readings that I will draw on in my lectures. They are all recommended but not essential for you to do well in this class. The main textbooks I refer to are more or less interchangeable as I note above. I endeavor to put as much material as possible on Dropbox for you. All articles can be found online using Google Scholar.

3.1 Introduction:19th Jan

- Hal R. Varian, What Use is Economic Theory? by Hal R. Varian University of California at Berkeley August 1989

- Gerard Debreu, Theoretic Models: Mathematical Form and Economic Content, *Econometrica* 54, Nr. 6 1986
- Dani Rodrik, *Economics Rules: The Rights and Wrongs of The Dismal Science* New York: Norton, 2015 Selected Chapters
- Vernon L. Smith, The Two Faces of Adam Smith, *Southern Economic Journal* 65, Nr. 1 1998

3.2 Consumer Theory, 26th January

- Varian, *Microeconomic Analysis* Chapter 7–9*

3.3 Producer Theory and the Firm & Competition, 2nd February

- Varian, *Microeconomic Analysis* Chapter 1–5*

3.4 Oligopoly Theory I. 9th February

- Arnold C. Harberger, Monopoly and Resource Allocation, *The American Economic Review* 44, Nr. 2 1954
- Either Hal R. Varian, *Microeconomic Analysis*, 3rd edition New York: Norton, 1992 Chapters 13 and 14 or Jean Tirole, *The Theory of Industrial Organization* Cambridge, M.A.: The MIT Press, 1988 Chapters 1 and 7* or David M. Kreps, *A Course in Microeconomic Theory* New York: Prentice Hall, 1990 Chapters 8 and 9*

3.5 Oligopoly Theory II, 16th February

- Either Hal R. Varian, *Microeconomic Analysis*, 3rd edition New York: Norton, 1992 Chapter 16 or David M. Kreps, *A Course in Microeconomic Theory* New York: Prentice Hall, 1990 Chapter 10* or Jean Tirole, *The Theory of Industrial Organization* Cambridge, M.A.: The MIT Press, 1988 Chapter 5*
- William J Baumol, Contestable Markets: An Uprising in the Theory of Industry Structure, *American Economic Review* 72, Nr. 1 March 1982

3.6 General Equilibrium and Externalities 18th February (Note Class Time)

- R. H. Coase, The Problem of Social Cost, *The Journal of Law and Economics* 3, Nr. 1 1960*
- Richard Hornbeck, Barbed Wire: Property Rights and Agricultural Development, *The Quarterly Journal of Economics* 125, Nr. 2 May 2010

- Varian, *Microeconomic Analysis* Chapters 17, 21, and 24*
- Louis Makowski and Joseph M. Ostroy, Perfect Competition and the Creativity of the Market, *Journal of Economic Literature* 39, Nr. 2 2001

3.7 Expected Utility Theory 1st March

- David M. Kreps, *A Course in Microeconomic Theory* New York: Prentice Hall, 1990 Chapter 3* or Hal R. Varian, *Microeconomic Analysis*, 3rd edition New York: Norton, 1992 Chapter 11
- Daniel Kahneman, Jack L. Knetsch and Richard H. Thaler, Experimental Tests of the Endowment Effect and the Coase Theorem, *Journal of Political Economy* 98, Nr. 6 1990

3.8 Risk, March 15th

- Daniel Kahneman and Amos Tversky, Prospect Theory: An Analysis of Decision under Risk, *Econometrica* 47, Nr. 2 1979*
- Nicholas C. Barberis, Thirty Years of Prospect Theory in Economics: A Review and Assessment, *Journal of Economic Perspectives* 27, Nr. 1 February 2013

3.9 Midterm, March 22nd

3.10 Game Theory 1, April 5th

- Avinash Dixit, D Reiley and S Skeath, *Games of Strategy* New York: W.W. Norton & Company, 2010 Chapters 1-8*
- Samuel Bowles, *Microeconomics, behaviour, institutions, and evolution* Oxford: Princeton University Press, 2005 Chapters 2 and 4

3.11 Game Theory 2, April 9th (Note Thursday Class Meeting)

- Avinash Dixit, D Reiley and S Skeath, *Games of Strategy* New York: W.W. Norton & Company, 2010 Chapters 9, 10, and 11*

3.12 Asymmetric Information I, April 12th

- John G. Riley, Silver Signals: Twenty-Five Years of Screening and Signaling, *Journal of Economic Literature* 39, Nr. 2 June 2001*
- George A Akerlof, The Market for 'Lemons': Quality Uncertainty and the Market Mechanism, *The Quarterly Journal of Economics* 84, Nr. 3 August 1970
- Avinash Dixit, D Reiley and S Skeath, *Games of Strategy* New York: W.W. Norton & Company, 2010 Chapters 9, 10, and 13*

- David M. Kreps, *A Course in Microeconomic Theory* New York: Prentice Hall, 1990 Chapter 17*

3.13 Asymmetric Information II, 19th April

- Liran Einav and Amy Finkelstein, Selection in Insurance Markets: Theory and Empirics in Pictures, *Journal of Economic Perspectives* 25, Nr. 1 Winter 2011

3.14 Review 28 April

References

- Akerlof, George A: The Market for 'Lemons': Quality Uncertainty and the Market Mechanism, *The Quarterly Journal of Economics* 84, Nr. 3 August 1970, 488–500
- Barberis, Nicholas C.: Thirty Years of Prospect Theory in Economics: A Review and Assessment, *Journal of Economic Perspectives* 27, Nr. 1 February 2013, 173–96
- Baumol, William J: Contestable Markets: An Uprising in the Theory of Industry Structure, *American Economic Review* 72, Nr. 1 March 1982, 1–15
- Bowles, Samuel: *Microeconomics, behaviour, institutions, and evolution* Oxford: Princeton University Press, 2005
- Coase, R. H.: The Problem of Social Cost, *The Journal of Law and Economics* 3, Nr. 1 1960, 1
- Debreu, Gerard: Theoretic Models: Mathematical Form and Economic Content, *Econometrica* 54, Nr. 6 1986, 1259–1270
- Dixit, Avinash, Reiley, D and Skeath, S: *Games of Strategy* New York: W.W. Norton & Company, 2010
- Einav, Liran and Finkelstein, Amy: Selection in Insurance Markets: Theory and Empirics in Pictures, *Journal of Economic Perspectives* 25, Nr. 1 Winter 2011, 115–38
- Harberger, Arnold C.: Monopoly and Resource Allocation, *The American Economic Review* 44, Nr. 2 1954, 77–87
- Hornbeck, Richard: Barbed Wire: Property Rights and Agricultural Development, *The Quarterly Journal of Economics* 125, Nr. 2 May 2010, 767–810
- Kahneman, Daniel, Knetsch, Jack L. and Thaler, Richard H.: Experimental Tests of the Endowment Effect and the Coase Theorem, *Journal of Political Economy* 98, Nr. 6 1990, 1325–1348
- Kahneman, Daniel and Tversky, Amos: Prospect Theory: An Analysis of Decision under Risk, *Econometrica* 47, Nr. 2 1979, 263–291
- Kreps, David M.: *A Course in Microeconomic Theory* New York: Prentice Hall, 1990
- Makowski, Louis and Ostroy, Joseph M.: Perfect Competition and the Creativity of the Market, *Journal of Economic Literature* 39, Nr. 2 2001, 479–535
- Riley, John G.: Silver Signals: Twenty-Five Years of Screening and Signaling, *Journal of Economic Literature* 39, Nr. 2 June 2001, 432–478
- Rodrik, Dani: *Economics Rules: The Rights and Wrongs of The Dismal Science* New York: Norton, 2015
- Smith, Vernon L.: The Two Faces of Adam Smith, *Southern Economic Journal* 65, Nr. 1 1998, 1–19
- Tirole, Jean: *The Theory of Industrial Organization* Cambridge, M.A.: The MIT Press, 1988
- Varian, Hal R.: What Use is Economic Theory? by Hal R. Varian University of California at Berkeley August 1989, Mimeo
- Varian, Hal R.: *Microeconomic Analysis*, 3rd edition New York: Norton, 1992
- Varian, Hal R.: *Intermediate Microeconomics* New York: Norton, 1999