

University of Alicante
First Year Q.E.D. Program
Microeconomics I Syllabus
Fall 2011

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Location: A1/1-49P.

Office hours: Mondays from 6:30 to 8:30pm; and Thursdays from 7:30 to 9pm.

Schedule: We will have 20 sessions of two hours each. The final exam will be during the December exam period.

Web page: Campus Virtual

Overview. Welcome to Microeconomics I. This is the first course in a year-long course in microeconomic theory. This course is designed with the two main purposes of providing students with a rigorous background in Microeconomics and preparing them to use economic models for their own research. We will cover the topics of consumption theory, production theory, individual decision making with uncertainty, the Arrow-Debreu general equilibrium model, and some basic issues in welfare measurement. While the topics in the course are mathematical, the emphasis is on economic content and research methodology rather than proofs and technical details. Nevertheless, we will use mathematical arguments to help explain the intuition of the theories studied.

Prerequisites. This class assumes a basic knowledge of intermediate microeconomics, and some level of mathematical sophistication, particularly with respect to optimization. A good place to start to get some mathematical background is the mathematical appendix in Mas-Colell, Whinston and Green or in Jehle and Reny (see below). Similarly, if you have never taken Economics before, you may want to have a look at an undergraduate Microeconomics text. Among the good options, my favourite is the book by Walter Nicholson *Microeconomic Theory: Basic Principles and Extensions* (South-Western College, 2002).

Requirements. Formal requirements for the course include regular attendance and participation in lectures, a number of problem sets, and a final examination.

Readings. The main text for the course is Mas-Colell, A., M. Whinston and J. Green, *Microeconomic Theory* (Oxford University Press, 1995). Students are encouraged to buy it. We will also refer sometimes to Kreps, D., *A Course in Microeconomic Theory* (Princeton University Press, 1990), Jehle, G. and P. Reny, *Advanced Microeconomic Theory* (Addison Wesley Longman, 2001), Rubinstein, A., *Lecture Notes in Microeconomic Theory*¹ (Princeton University Press, 2006) (online and free at <http://press.princeton.edu/rubinstein>), and Varian, H., *Microeconomic Analysis* (Norton,

3rd ed., 1994). All these textbooks are available at the library and they will be used in the subsequent year-long sequences as references. Additional readings will be suggested at the end of each topic.

Homework. In order to master the material, you need to practice the concepts and techniques learnt in class and know when to apply them. It is not enough to understand what is done in class. Like swimming or playing the violin, you don't improve your speed or stamina while watching others swim or play. The biggest requirement is practice! There will be assigned questions for each topic covered. You need to test yourself by doing the questions.

Assignments. There will be 8 official problem sets. Cooperation in the assignments is encouraged, but they should be written up individually. Extensions will be granted only under truly exceptional circumstances.

Grading. The grade for this course will be based on one midterm, a final examination and on the problem sets. You can work together on the problem sets, but each student must hand in his individual copy. All exams will be closed books and closed notes. The grading scheme is:

Problem Sets	15 %
Midterm	35 %*
Final	50 %

Class attendance, participation and interest are also rewarded.

As it has already been mentioned, the assignments will prove useful in your understanding the material and preparing for the exams. The problems will be graded, and reviewed in class in the TA session. You are welcome to ask questions about them in class or to come to review them during the TA (and then my) office hours.

*The midterm will be a two-hour exam given during class time. The midterm grade will only be taken into consideration if its grade is higher than the grade obtained in the final exam.

The final will be a three-hour exam given during exam week. The final is explicitly cumulative. There will be no additional opportunities to improve your grade. Please plan on doing well on the assignments and exams given. Students caught cheating will be prosecuted through the appropriate channels in the University.

Outline of Topics

Lecture time will not be spread evenly over the material discussed in the textbook. Disproportionate time will be devoted to the more important or difficult ideas while ideas that are likely to fall into place easily will not be reiterated in the lectures. Also, occasionally, ideas that are not considered in the textbook will be discussed. Thus, the lectures and the textbook are complements, not substitutes for each other! All the course material will be published in campus virtual: lecture notes, slides, additional suggested readings and suggested problems. You will be responsible for material covered in lecture, whether or not the material appears in the main text. If changes or additions to the syllabus are announced in class you are responsible for being aware of these changes. This is an outline of the topics to be covered in this course:

1. Consumer theory. **Basic Reading:** MWG 1,2,3,4.

Topics: Introduction to the consumer problem, classical demand theory, properties of utility and demand functions, solving the consumer problem, welfare evaluation, aggregation, consumption over time.

2. Producer theory. **Basic Reading:** MWG 5

Topics: Production sets, production with a single output, cost minimization, the geometry of cost functions, aggregation, efficient production, constant returns technologies.

3. Choice under uncertainty. **Basic Reading:** MWG 6

Topics: Lotteries, the Expected Utility Theorem, utility for money and risk aversion, stochastic dominance, applications to insurance and portfolio choice, states of nature, subjective probability.

4. Partial and General equilibrium. **Basic Reading:** MWG 10, 15, 16, 17, 19.

Topics: Pareto optimality and competitive equilibria, partial equilibrium competitive analysis, the Edgeworth box, the First and Second Fundamental Theorems of Welfare Economics, the positive theory of equilibrium, general equilibrium under uncertainty.

Additional references

Blundell, R. and T. Stoker (2005): "Heterogeneity and Aggregation," *Journal of Economic Literature* 43 (2), 347-391.

Ellsberg, D. (1961): "Risk, ambiguity, and the Savage axioms," *Quarterly Journal of Economics* 75, 643-69.

Goulder, L. and R. Williams (2003): "The Substantial Bias from Ignoring General Equilibrium Effects in Estimating Excess Burden, and a Practical Solution," *Journal of Political Economy* 111 (4), 898-927.

Grether D. and C. Plott (1979): "Economic Theory of Choice and the Preference Reversal Phenomenon," *American Economic Review* 69 (4), 623-638.

Hausman, J. (1981): "Exact Consumer Surplus and Deadweight Loss," *American Economic Review* 71 (4), 662-676.

Kreps, D (1988): *Notes on the Theory of Choice*, Westview Press.

Machina, M. (1987): "Choice under Uncertainty: Problems Solved and Unsolved," *Journal of Economic Perspectives* 1 (1), 121-154.

Pratt, J. (1964): "Risk Aversion in the Small and in the Large," *Econometrica* 32 (1-2), 122-136.

Rabin, M. (1998): "Psychology and Economics," *Journal of Economic Literature* 36 (1), 11-46.

Rabin, M. (2000): "Risk Aversion and Expected Utility Theory: A Calibration Theorem," *Econometrica* 68 (5), 1281-1292.

Rothschild, M. and J. Stiglitz (1970): "Increasing Risk: I. A Definition," *Journal of Economic Theory* 2, 225-243.

Stiglitz, J. (1969): "The Effects of Income, Wealth, and Capital Gains Taxation on Risk-Taking," *Quarterly Journal of Economics* 83 (2), 263-283.

Tversky, A. and D. Kahneman (1981): "The Framing of Decisions and the Psychology of Choice," *Science* 211, 453-458.