Advanced Managerial Economics (MECO 6345)
Microeconomic Theory I (ECON 6301)
Course Syllabus

Fall 2014

Logistics

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Class Time: Thursdays 10:00 – 12:45

Class Location: JSOM 2.904

Office Hours: TBD in first class

Website: `https://elearning.utdallas.edu`

Course Description

This is an advanced microeconomic theory course that is primarily intended for Ph.D. students. It aims to provide a rigorous treatment of theories on consumers, firms, and the market. Economic problems are studied using analytic techniques such as the analysis of optimization and equilibrium. Formal proofs will be used throughout. It will help students develop skills necessary to successfully complete advanced economic analysis and undertake future research in economics, finance, marketing, and accounting.

Student Learning Objectives

There are three objectives for this course:

1. Students will analyze the theory of consumer such as preference and choice, consumer demand, choice under uncertainty.

2. Students will be able to analyze firms decisions using cost-minimization and profit maximization framework and the outcome of firms decisions—the supply curve.

3. Students will understand the determinants of market equilibrium under different market structures such as competitive market, monopolistic market, and oligopoly.

Required Textbooks and Materials

The required textbook for the course is *Microeconomic Theory*, Oxford University Press, 1995, by Mas-Colell, Whinston, and Green.

A useful book which covers largely the same material and may be used as a supplemental text is *Microeconomic Foundations I: Choice and Competitive Markets*, Princeton University Press, 2013 by David M. Kreps.

Finally, two other reference books for the class are:

- *Microeconomic Analysis*, 3rd Edition, W. W. Norton & Company, 1992, by Hal Varian.

- *Lecture Notes in Microeconomic Theory: The Economic Agent*, 2nd Edition, Princeton University Press, 2012, by Ariel Rubinstein[1]

Rough Outline of Course

1. Decision Theory (Certainty)

    - Choice, Preferences and Utility Functions: completeness, transitivity, ordinal utility, Lexicographic preferences, continuity, existence and continuity of utility function, monotonicity, convexity, quasi-concave utility, indifference curves, homotheticity, quasi-linearity, separability, choice, revealed preferences
    - MWG 1A - D, 3A - C; K1 - 2

2. Consumer Theory I

    - Primal Approach to Demand, Theorem of the Maximum, Consumer optimization, Marshallian demand, Walras Law, Revealed Preference, the Compensated Law of Demand
    - MWG 2A - F, 3D, 3J; K3 - 4

3. Consumer Theory II

    - Dual Approach to Demand, indirect utility, envelope theorem, Roy's identity, Hicksian demand, the expenditure function, Shepard's Lemma, Hicks' composite commodity theorem; income/price elasticity of demand, Slutsky's Theorem, income and substitution effects, normal and inferior goods, consumer surplus and willingness-to-pay
    - MWG 3D - G, 3I - J; K10 - 11

4. Choice Under Uncertainty

    - Expected Utility, Risk Aversion, Information Separability, preferences over lotteries, vNM Expected Utility Theorem, independence axiom, Allais and Ellsberg Paradoxes, Prospect Theory, Stochastic dominance, concavity, risk premium, Arrow-Pratt coefficient of risk aversion, Rabin's calibration theorem, State-dependent utility
    - MWG 6A - E; K5 - 6

5. Production

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[1]Can be freely downloaded from his website.

- Production Sets, Profit Maximization and Cost Minimization, Cost Function, Long-run and Short-run costs

- MWG 5A - D; K9

6. Competitive Markets

- Pareto Optimality and Competitive Equilibria, Partial Equilibrium Competitive Analysis, Welfare Theorems, Free-entry and Long-run Competitive Equilibrium

- MWG 10A - F

7. Brief Introduction to Game Theory, Monopoly and Oligopoly

- Nash Equilibrium, Monopoly Pricing, Static Models of Oligopoly

- MWG 8A, B, D, 12A - C

Coursework, Exams and Grading

Your grade in the course will be based on problem sets, a midterm exam and a final exam according to the following scale:

- Weekly Problem Sets: 20%

- Midterm Exam: 40% (October 9, 2014)

- Final Exam: 40% (December 4, 2014)

Both the midterm and final exams will be held in class and will be closed book and closed notes exams. The final exam will only cover material from after the midterm exam.

There will be a weekly assignment (except for exam weeks) that will be due at the beginning of the following class. Each problem set will typically consist of a small number of required questions, as well as a number of recommended problems. The recommended problems will typically be from the textbook. While it is strongly recommended that all students do both the required and recommended problems, only the required problems will be graded and each problem set will be graded out of a maximum possible 10 points, and there will be four possible grades, at my sole discretion: 10 (excellent: only very minor mistakes, if any) , 7 (good: mostly correct, but one or more substantive flaws), 4 (poor: partially incomplete or several substantive flaws, 0 (unacceptable: fail to hand in, or hand in but with very little discernible effort and many substantive flaws).

In addition, each of the Ph.D. students (most likely working in a group of 2) will be required to prepare solutions to one set of the recommended questions, which will be distributed to your fellow classmates. The final solutions must be typed and sent to me for distribution no later than Friday at 1:00PM of the week the assignment is due. Students responsible for preparing solutions to the recommended problems should plan to meet with me during office hours, or some other mutually agreeable time, to discuss the solutions and to make sure that they are correct and well-presented. This will have the weight of **two** regular problem sets.

At the end of the semester, when computing your grade for the problem sets, I will drop the lowest score.

Note: *For some of the homework problems (either required or recommended), there may be solutions floating around for these problems. It is decidedly not to your advantage to copy from these solutions. Not only will you receive a grade of 0 for doing so, but* **more importantly** *you will very likely not learn the material*

sufficiently well to succeed on the exams. Before being tempted to consult with solutions, please approach either myself or another classmate for help.

Any questions about your grade on an assignment of exam must be made within **one week** (assignment) or **two weeks** (exam) of the relevant course work being returned to students.

Other Policies, Rules and Guidelines

For a full list of UT Dallas policies on things such as student conduct, academic integrity, religious holidays, student grievance procedure, and disability services, among others, please go to: `http://go.utdallas.edu/syllabus-policies`.