Econ 701A – Microeconomic Theory

Steven A. Matthews, University of Pennsylvania

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Description. This is a half-semester PhD course focusing on decision, consumer and producer theory. Its prerequisite is Econ 897 (Math Camp).

Class Meetings. MW, 1:30-3 pm in 410 McNeil

Professor. Steven Matthews <stevenma@econ.upenn.edu>
Office hours: Thursdays, 3:30-5 pm in 521 McNeil

Teaching Assistants. Two TAs will hold weekly recitations and office hours:

- Shunyi Zhao <shzhao@sas.upenn.edu>
  Office hours: TBA
- Joao Granja De Almeida <joaog@sas.upenn.edu>
  Office hours: TBA

Emailing. Put "ECON 701" in the subject line when you email us.

Homework. Weekly problem sets, graded on a scale 1-10. No late homework will be graded. You will gain the most from spending a lot of time doing the homeworks, without reading solutions that may be floating about. Study groups are good, but write up your solutions individually. After they have been turned in, official solutions will be posted to each problem set and exam.

Exams. One 30 minute quiz, one 75 minute exam. Both closed book, notes, and devices

Grading. 20% quiz and 80% midterm. Homework determines borderline grades

Course Materials. Posted on Canvas: http://canvas.upenn.edu

Required Text: Mas-Colell, Whinston and Green, *Microeconomic Theory*

Supplementary Texts:

- Jehle and Reny, *Advanced Microeconomic Theory,* 3rd ed.
- Miller, *Notes on Microeconomic Theory*: https://business.illinois.edu/nmiller/notes.html#download
- Rubinstein, *Lecture Notes in Microeconomic Theory*, http://arielrubinstein.tau.ac.il/books.html
- Gilboa, *Theory of Decision under Uncertainty*

Important Dates.

- Quiz on Wed 9/28 (in class)
- Exam on Wed 10/18 (in class)

Tentative Topics Outline

1. Decision Theory Foundations (MWG 1)
   - Preferences. Rational preferences. Utility representation
   - Behavior: Feasible sets and choice rules
   - Rational choice: weak axiom, rationalizability theorem
2. Consumer Choice and Preferences (MWG 2.A-E, 3.A-C)
   - Commodities (goods, dates, states). Consumption and budget sets
   - Walrasian demand correspondence. Homogeneity and Walras' law.
   - Comparative statics
   - Preference assumptions
   - Utility representation theorems
3. Demand Theory (MWG 3.D-H)
   - Utility maximization: Walrasian demand and indirect utility functions
   - Cost minimization: Hicksian demand and expenditure functions
   - Envelope theorem. Consequences: Shephard's lemma, Roy's identity
   - Slutsky decomposition
   - Briefly: Integrability
4. Further Topics in Demand Theory (MWG 3.I-J, MWG 4)
   - Welfare evaluation - consumer surplus measures
   - Revealed preference
5. Theory of the Firm (MWG 5)
   - Production sets and technology
   - Profit maximization and cost minimization
   - Comparative statics. Le Chatelier's principle
6. Choice under Uncertainty (MWG 6.A-D,F)
   - Expected utility theorem (vNM)
   - Comparing and measuring risk aversion (Pratt's Theorem)
   - Briefly: Subjective probability theorem (Savage)