

ECO2030: Microeconomic Theory I, Unit 2

Spring 2014

Instructor: Xianwen Shi

Time and Location: Monday and Wednesday 9:00-11:00am, BF 323

Office Hours: GE 208, Friday 2:00-4:00pm

Email: xianwen.shi@utoronto.ca

Course Webpage: <http://portal.utoronto.ca> (Blackboard)

TA: Ashique Habib, ashique.habib@mail.utoronto.ca

TA Tutorial: Wednesday 2:00pm-4:00pm in Rotman ****

Course Description

The first part of this course provides a self-contained introduction to game theory. We study strategic games (with complete or incomplete information) and extensive games (with complete or incomplete information). We introduce several important solution concepts to make predictions.

The second part of this course is designed to apply game theory tools you learned in the first part to study the theory of incentives under asymmetric information. One key assumption of the competitive model is perfect information. Many market failures result from imperfect information and a unified body sometimes referred to as Information Economics has been built up over the last forty years. This work can be seen as a special case of games of incomplete information, but it is so central to modern economics that we offer a self-contained treatment.

Texts

Required textbook:

- Mas-Colell, Whinston and Green (1995), Microeconomic Theory (MWG).

Other useful references:

- Osborne and Rubinstein (1994), A Course in Game Theory (OR).
- Salanie (1997), The Economics of Contracts: A Primer (SA).
- Jehle and Reny (2011), Advanced Microeconomic Theory (JR).

Online lecture notes:

- Dirk Bergemann: <http://www.econ.yale.edu/~dirkb/teach/501b-09-10/lecturenotes/lectures-501b-08-09-information.pdf>
- Steve Tadelis: http://faculty.haas.berkeley.edu/stadelis/Econ_206_notes_2006.pdf

Problem Sets

There will be four problem sets. They will not be collected and graded. TA will go through them in Tutorial Sessions.

Grade

Your grade for this unit will be based on the final examination (time and location, TBA). Your grade in Eco 2030 will be the average of your grades in both units.

Topics

Adverse selection: lemons market (MWG Ch13, SA Ch2, JR Ch8)

- Akerlof (1970), "The Market for Lemons," *QJE*.

Useful tools: envelope theorem, comparative statics, and stochastic order

- Milgrom and Segal (2002), "Envelope Theorems for Arbitrary Choice Sets," *Econometrica*.
- Milgrom and Shannon (1994), "Monotone Comparative Statics," *Econometrica*.
- Bagnoli and Bergstrom (2005), "Log-Concave Probability and Its Applications," *Economic Theory*.
- Shaked and Shanthikumar (2007), *Stochastic Orders*.
- Muller and Stoyan (2002), *Comparison Methods for Stochastic Models and Risks*.

Signaling (MWG Ch13, SA Ch4, JR Ch8)

- Michael Spence (1973), "Job Market Signalling," *QJE*.

Moral hazard (MWG Ch14, SA Ch5, JR Ch8)

- Holmstrom (1979), "Moral Hazard and Observability," *RAND*.

Screening: nonlinear pricing (MWG Ch13, SA Ch2-3, JR Ch8)

- Mussa and Rosen (1978), "Monopoly and Product Quality," *JET*.
- Maskin and Riley (1984), "Monopoly with Incomplete Information," *RAND*.

Mechanism design (MWG Ch23, JR Ch9)

- Myerson (1981), "Optimal Auction Design," *Mathematics of Operation Research*.
- McAfee and McMillan (1987), "Auctions and Bidding," *Journal of Economic Literature*.
- Tilman Borgers: "An Introduction to the Theory of Mechanism Design," online.

Social choice (MWG Ch21, JR Ch6)

- Reny (2001), "Arrow's Theorem and the Gibbard-Satterthwaite Theorem: A Unified Approach," *Economics Letters*.
- Geanakoplos (2005), "Three Brief Proofs of Arrow's Impossibility Theorem," *Economic Theory*.