

Course Outline

Eco 2030: Microeconomic Theory I, Unit 2

Spring 2011, SS 1072, Monday 9-11; WO 35, Wednesday 9-11

Instructor: Xianwen Shi

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

Email: xianwen.shi@utoronto.ca

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

TA: Kevin Fawcett

TA Tutorial: Wednesday 2:10pm–4pm in GE 100

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 thirty 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:

Gibbons (1991), *Game Theory for Applied Economists* (GI).

Salanie (1997), *The Economics of Contracts: A Primer* (SA).

Bolton and Dewatripont (2005), *Contract Theory* (BD).

Osborne and Rubinstein (1994), *A Course in Game Theory* (OR).

Topics

- Extensive games with incomplete information (MWG Ch9, GI Ch4, OR Ch11-12)
- Adverse selection: lemons market (MWG Ch13, SA Ch2, BD Ch1)
 - Akerlof (1970), “The Market for Lemons,” *Quarterly Journal of Economics*.

- Signaling (MWG Ch13, GI Ch4, SA Ch4, BD Ch3)
 - Michael Spence (1973), “Job Market Signalling,” Quarterly Journal of Economics.
- Screening: nonlinear pricing (MWG Ch13, SA Ch2-3, BD Ch2)
 - Mussa and Rosen (1978), “Monopoly and Product Quality,” Journal of Economic Theory.
 - Maskin and Riley (1984), “Monopoly with Incomplete Information,” Rand Journal of Economics.
- Moral hazard (MWG Ch14, SA Ch5, BD Ch4)
 - Holmstrom (1979), “Moral Hazard and Observability,” RAND Journal of Economics.
- Mechanism design (MWG Ch23)
 - Geanakoplos (2005), “Three Brief Proofs of Arrow’s Impossibility Theorem,” Economic Theory.
 - Myerson (1981), “Optimal Auction Design,” Mathematics of Operation Research.
 - McAfee and McMillan (1987), “Auctions and Bidding,” Journal of Economic Literature.

Problem Sets

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

Grades

Your grade for this unit will be based on the final examination which will be held in early April (TBA) for three hours. Your grade in Eco 2030 will be the average of your grades in both units.