ECO2030: Microeconomic Theory I, Unit 2

Winter 2020

Instructor: Xianwen Shi

Time and Location: 2:00–4:00pm Mondays and Wednesdays in GE100

Office Hours: GE 208, Fridays 2:00-3:00pm

Email: xianwen.shi@utoronto.ca

Course Webpage: http://q.utoronto.ca (Quercus)

TA: Ruizhi Zhu, rz.zhu@mail.utoronto.ca

TA Tutorial: Thursdays 4:00-6:00pm in FE135

Course Description

The first part of this course (taught by Prof. Roesler) provides a self-contained introduction to game theory. 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. We cover basic models of adverse selection (hidden information) and models of moral hazard (hidden actions), and also offer an introduction to the theory of mechanism design. These models, broadly referred to as information economics, have found applications in every field of economics and some parts of political science and computer science. The course concludes with a brief introduction of the theory of social choice.

Texts

Required textbook:
- Mas-Colell, Whinston and Green (1995), *Microeconomic Theory* (MWG).

Other useful references:
- Mailath (2019), *Modeling Strategic Behavior* (M).
- Jehle and Reny (2011), *Advanced Microeconomic Theory* (JR).

Online lecture note:
- Tadelies and Segal (2005), *Lectures in Contract Theory*.

Problem Sets

There will be five problem sets. They will be coarsely graded by our TA who will go through them in Tutorial Sessions.

Grade

Your grade for this unit will be 90% of your mark on the final examination plus 10% of your average mark on the problem sets. Your grade in Eco2030 will be the average of your grades in both units.

Topics

Adverse selection and disclosure (MWG Ch13, JR Ch8)
- Akerlof (1970), "The Market for Lemons," *QJE*.
- Verrecchia (2001), "Essays on Disclosure," *Journal of Accounting and Economics*.

Signaling (MWG Ch13, M Ch6, JR Ch8)
- Michael Spence (1973), "Job Market Signalling," *QJE*.

Moral hazard (MWG Ch14, M Ch13, JR Ch8)
- Holmstrom (1979), "Moral Hazard and Observability," *RAND*.

Screening: nonlinear pricing (MWG Ch13, M Ch10, JR Ch8)
- Mussa and Rosen (1978), "Monopoly and Product Quality," *JET*.
- Maskin and Riley (1984), "Monopoly with Incomplete Information," *RAND*.

Mechanism design (MWG Ch23, M Ch11-12, JR Ch9)
- Myerson (1981), "Optimal Auction Design," *Mathematics of Operation Research*.
- McAfee and McMillan (1987), "Auctions and Bidding," *Journal of Economic Literature*.
- Tilman Borgers (2015), *An Introduction to the Theory of Mechanism Design*

Social choice (MWG Ch21, M Ch11.1, 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*.

Cheap talk and Bayesian persuasion (**time permitting**)
- Crawford and Sobel (1982), "Strategic Information Transmission," *Econometrica*.
- Kamenica and Gentzkow (2011), "Bayesian Persuasion," *AER*.