Advanced Microeconomics II

This course is a continuation of the Advanced Microeconomics I and its aim is to make students familiar with some more advanced methods in microeconomic theory as well as with some current research in formal microeconomic modeling. We recommend few textbooks: Mas-Colell, Whinston, and Green (1995), Kreps (2012), Jehle and Reny (2011) or Rubinstein (2006) but we will give some more detailed reading during the class. The course is formal hence students are expected to know basic mathematical tools including: calculus, (smooth) constrained optimization, convex analysis or linear algebra. Knowledge of mathematical appendix of Mas-Colell, Whinston, and Green (1995) should suffice.

Final exam (50%), homework (25%), class presentations (25%).


2. Subjective Expected utility. De Finetti Theorem, Savage Theorem, definition of states, critique of Savage, objectivity and rationality, Anscombe-Aumann Theorem
   Readings: Gilboa (2009), chapters 9-14, Schmeidler (2004): selected parts

3. Ambiguity and decision making under uncertainty. Choquet Expected Utility, Maxmin expected utility.
   Readings: Gilboa (2009), chapters 15,17, Schmeidler (2004): selected parts

4. Alternative behavioral theories. Yaari dual theory of choice under risk (probability weighting), Prospect Theory (original and cumulative), range-dependent utility
   Readings: Gilboa (2009), chapter 16, Noor (2012), chapter 6, Kontek and Lewandowski (2013)

5. Game theory. Review*. Nash, Bayesian-Nash, subgame perfect, weak perfect Bayesian equilibrium, sequential equilibrium.

   Readings: Laffont and Martimort (2002), 4-5.


8. Adverse selection.


10. Mechanism design and auctions. Mechanism design and auctions. Introduction to mechanism design, revelation principle, incentive compatibility, individual rationality, optimal mechanisms, the VCG- mechanism

11. Foundation of intertemporal choice I. Discounted utility theory: static and dynamic; Desire for immediate gratification: static beta-delta model.
    Readings: Noor (2012), chapter 8-9

    Readings: Noor (2012), chapter 9-10
13. **Comparative statics**. Introduction to posets and lattices. (Quasi)-supermodularity and (single crossing) increasing differences. Strong set order and internal dominance order. Theorems of Topkis, Milgrom/Schannon, Venitott and Quah. Tarski’s fixed point theorem.


14. **Comparative statics in applications**. Monopoly, supermodular games, Bertrand competition, consumer choice, choice under uncertainty.

**Readings**: Vives (2000)

15. Class presentations 1, 2

16. Class presentations 3, 4

The exam is based on topics and problems discussed during the course and posted on the web pages of the instructors. The homework list (4 in total) will be posted consecutively on the web. It is your responsibility to get it from there. Homework is due in class on the due date. Remember that homework is the most valuable part of the course. Always write correct English with complete sentences. You may talk about the problems with other students, but you must write up your own solutions in your own words.

You should prepare a class presentation in pairs on one of the topics. Specifically we ask you to read in details one/two papers that we will choose and your aim is to explain it to the students. The topics are:

1. costly self control
2. applications of monotone comparative statics
3. behavioral contract theory
4. auctions
5. applications of risk/uncertainty/ambiguity in decision making
6. behavioral aspects of game theory

Please choose your partner and your topic as soon as possible and we will provide you with the paper to present.

We welcome questions at any time. Please don’t hesitate to ask us during class if there is something that you don’t understand or that you want to discuss. (The only exception is a question about the grading of your homework or exam paper. Please ask these questions before or after class, or in office hours.) You may also ask questions in office hours, or any other time that you catch us in my office. You may also ask questions by email.

While studying you may find useful to use various scientific paper browsers like e.g.: econpapers.repec.org, ideas.repec.org and scholar.google.com; article databases, e.g. www.jstor.org, www.sciencedirect.com and www.nber.org.

We invite all interested in economic theory to participate in Warsaw Economic Seminar (sites.google.com/site/warsaweconseminars/).

**References**


