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## 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. The course is formal hence students are expected to know basic mathematical tools including: calculus, (smooth) constrained optimization, convex analysis and linear algebra. Knowledge of mathematical appendix of Mas-Colell, Whinston, and Green (1995) should suffice.

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

1. **Preferences and consumer choice. Review.** Debreu, Afriat and Brown-Matzkin theorems.  
**Readings:** Kreps (2012), chapters 2.3 4.2, Brown and Matzkin (1996).
2. **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, Veinott and Quah. Tarski's fixed point theorem.  
**Readings:** Topkis (1998).
3. **Comparative statics in applications.** Monopoly, supermodular games, Bertrand competition, consumer choice, choice under uncertainty.  
**Readings:** Vives (2000)
4. **Matching.** Sorting through search and matching.  
**Readings:** Chade, Eeckhout, and Smith (2017)
5. **Hidden actions.** Grossman-Hart model, its extensions (linearity, multiple task, multiple agents) and applications (contracting). Common agency.  
**Readings:** Laffont and Martimort (2002): 4-5. Holmstrom (1982). Jehle and Reny (2011): 8.
6. **Repeated hidden actions.** Dynamic models.  
**Readings:** Laffont and Martimort (2002): 8.2
7. **Hidden information.** Monopolistic screening and adverse selection.  
**Readings:** Laffont and Martimort (2002), 2-3. Salanie (2005): 2,3.
8. **Signalling.** Spence model plus review of game theory (weak and perfect Bayesian equilibrium)  
**Readings:** Mas-Colell, Whinston, and Green (1995): 13. Fudenberg and Tirole (2002): 4. Salanie (2005): 4.
9. **Time consistency 1.** Time-consistency. Quasi-hyperbolic discounting. Optimal taxation.  
**Readings:** Noor (2012), Caplin and Leahy (2006).
10. **Time consistency 2.** Menu models. Public policy models.  
**Readings:** Dekel and Lipman (2012); Gul and Pesendorfer (2001) and Kydland and Prescott (1980)
11. **Class presentations 1, 2**
12. **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. time consistency
2. costly self control
3. applications of monotone comparative statics
4. behavioral contract theory
5. developments in matching and search theory
6. developments in adverse selection and signalling
7. 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](http://econpapers.repec.org), [ideas.repec.org](http://ideas.repec.org) and [scholar.google.com](http://scholar.google.com); article databases, e.g. [www.jstor.org](http://www.jstor.org), [www.sciencedirect.com](http://www.sciencedirect.com) and [www.nber.org](http://www.nber.org).

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

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