

BGPE Course on Advanced Microeconomics

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Goals. This course covers at an advanced level the principles of microeconomic theory widely used in research in economics. The goal is to introduce advanced level textbook material and to make the connection to recent ongoing research. The topics covered are choice theory, stochastic choice, choice under uncertainty, demand theory, general equilibrium theory, and mechanism design theory.

Prerequisites. Undergraduate background in microeconomics and game theory.

Time Schedule.

Sunday, August 14

19:00 Welcome meeting and dinner

Monday, August 15 - Thursday August 18

09:00–10:30 Lecture

10:30–11:00 Coffee Break

11:00–12:30 Lecture

12:30–14:00 Lunch

14:00–15:30 Problem Session

15:30–16:00 Coffee Break

16:00–17:30 Problem Session

19:00– Dinner

Friday, August 19

09:00–10:30 Lecture

10:30–11:00 Coffee Break

11:00–12:30 Lecture

12:30–14:00 Lunch

14:00–15:30 Problem Session

Materials.

I will make available the lecture slides and the problem sets. Written solutions to the problems will be provided after the problem sessions.

Course Outline.

1. Choice Theory (Lecture 1)

- Choice-based approach, WARP, preference-based approach, utility representation, from preferences to choice and back, limited attention
- Literature: MWG chapter 1, Masatlioglu et al. (2012)

2. Stochastic Choice (Lecture 2)

- Random preference model, random utility model, multinomial logit, Luce IIA, identification issues
- Literature: APT chapters 2-3, Alós-Ferrer et al. (2021)

3. Choice Under Uncertainty (Lectures 3 & 4)

- Independence axiom, Allais paradox, expected utility theory, risk aversion, stochastic dominance, reference-dependent risk attitudes
- Literature: MWG chapter 6, Köszegi and Rabin (2007)

4. Demand Theory (Lectures 5 & 6)

- Walrasian demand, comparative statics, compensated law of demand, Marshallian demand, indirect utility, Hicksian demand, expenditure function, duality, SARP and GARP, welfare analysis, measuring rationality
- Literature: MWG chapters 2-4, Mononen (2022)

5. General Equilibrium Theory (Lectures 7 & 8)

- Economies and allocations, Pareto optimality, Walrasian equilibrium, fundamental welfare theorems, interdependent preferences in general equilibrium
- Literature: MWG chapters 10 & 15-17 & 19, Dufwenberg et al. (2011)

6. Mechanism Design Theory (Lectures 9 & 10)

- Social choice functions, revelation principle, possibility and impossibility results, optimal auctions, externality robustness
- Literature: MWG chapter 23, Bierbrauer and Netzer (2016)

References.

Textbooks:

[MWG] Mas-Colell, A., M.D. Whinston, and J.R. Green, *Microeconomic Theory*, Oxford University Press, 1995.

[APT] Anderson, S.P., A. de Palma, and J.F. Thisse, *Discrete Choice Theory of Product Differentiation*, MIT Press, 1992.

Papers:

- Alós-Ferrer, C., Fehr, E. and N. Netzer (2021): Time Will Tell: Recovering Preferences when Choices Are Noisy, *Journal of Political Economy*, 129, 1828-1877.
- Bierbrauer, F., and N. Netzer (2016): Mechanism Design and Intentions, *Journal of Economic Theory*, 163, 557-603.
- Dufwenberg, M., Heidhues, P., Kirchsteiger, G., Riedel, F., and J. Sobel (2011): Other-Regarding Preferences in General Equilibrium, *Review of Economic Studies*, 78, 613-639.
- Köszegi, B., and M. Rabin (2007): Reference-Dependent Risk Attitudes, *American Economic Review*, 97, 1047-1073.
- Masatlioglu, Y., D. Nakajima, and E.Y. Ozbay (2012): Revealed Attention, *American Economic Review*, 102, 2183-2205.
- Mononen, L. (2022): Computing and Comparing Measures of Rationality, mimeo.