Bavarian Graduate Program in Economics (BGPE)

Advanced Microeconomics Syllabus

Christoph Kuzmics

February 8–13, 2026

Course Outline

The course provides a thorough treatment of selected topics in decision theory, game theory, information economics, and mechanism and information design. Classes will be a mix of lectures, exercises, and experiments.

Prerequisites

The course is self-contained. Basic knowledge of probability and calculus are assumed, and an undergraduate background in microeconomics and game theory is useful (but not necessary).

Tentative Lecture Plan

Sunday (8 February)
19:00–19:30 Brief Introduction
19:30– Dinner

Monday–Thursday Schedule
7:00–9:00 Breakfast
9:00–10:30 Class
10:30–11:00 Coffee break
11:00–12:30 Class
12:30–14:00 Lunch
14:00–15:30 Class
15:30–16:00 Coffee break
16:00–17:30 Class
19:00– Dinner

Friday Schedule

7:00–9:00 Breakfast
9:00–10:30 Class
10:30–11:00 Coffee break
11:00–12:30 Class
12:30–14:00 Lunch

Textbooks

There are many textbooks on Game Theory and Advanced Microeconomics that cover parts of the various topics that we will discuss. Students are also encouraged to Google terms and look them up on Wikipedia or similar sources. Three textbooks that are commonly used are:

[**MWG**] Mas-Colell, Whinston, and Green, *Microeconomic Theory*, 1995

[**O**] Osborne, *An Introduction to Game Theory*, 2009

[**MSZ**] Maschler, Solan, and Zamir, *Game Theory*, 2013

Content

Monday

Dominance in Games [MWG 7.B, 7.D, 8.B; O 2.1, 2.9; MSZ 4.1, 4.3–4.6], Decision Theory and Statistics [Kuzmics, 2017], Iterated Dominance [MWG 8.C; O 12; MSZ 4.7], Mixed Strategies [MWG 7.E; O 4.2; MSZ 5.1], Nash equilibrium [MWG 8.D; O 2.6, 2.7, 4.3; MSZ 4.8, 4.9], Focal Points [O 2.7; Alós-Ferrer and Kuzmics, 2013], Evolutionary Stable Strategies [Weibull, 1997 (Ch. 2); O 13.1, 13.2; MSZ 5.8]

Tuesday

Backward Induction [MWG 9.A, 9.B; O 5.1, 5.2, 5.5; MSZ 3.1, 3.3], Subgame Perfect Equilibrium [MWG 9.B; O 5.4; MSZ 7.1], Repeated Games [MWG 12.D; O 14.1–7, 15.2; MSZ 4.10, 13.1, 13.6], Perfect Bayesian and Sequential Equilibrium [MWG 9.B, 9.C; O 10.1, 10.4; MSZ 7.4]

Wednesday

Games with Incomplete Information: Lying, Adverse Selection [MWG 13.A, 13.B], Signalling [MWG 13.C, O 10.5], Herding [Bikhchandani et al., 1992], Strategic Communication (Cheap Talk) [O 10.8]

Thursday
Information and Mechanism Design: Bayesian Persuasion [Kamenica and Gentzkow, 2011], Mechanisms (for selling and for public good provision) [MWG 23; MSZ 12], an impossibility result (Myerson–Satterthwaite in dominant strategies) [Hagerty and Rogerson, 1987], from thin to thick markets [Rustichini et al., 1994]

Friday
Reflection and discussion about what we have learnt.

Additional References

- Alós-Ferrer, Carlos, and Christoph Kuzmics. "Hidden symmetries and focal points." *Journal of Economic Theory* 148.1 (2013): 226–258.
- Bikhchandani, Sushil, David Hirshleifer, and Ivo Welch. "A theory of fads, fashion, custom, and cultural change as informational cascades." *Journal of Political Economy* 100.5 (1992): 992–1026.
- Hagerty, Kathleen M., and William P. Rogerson. "Robust trading mechanisms." *Journal of Economic Theory* 42.1 (1987): 94–107.
- Kamenica, Emir, and Matthew Gentzkow. "Bayesian persuasion." *American Economic Review* 101.6 (2011): 2590–2615.
- Kuzmics, Christoph. "Abraham Wald's complete class theorem and Knightian uncertainty." *Games and Economic Behavior* 104 (2017): 666–673.
- Rustichini, Aldo, Mark A. Satterthwaite, and Steven R. Williams. "Convergence to efficiency in a simple market with incomplete information." *Econometrica* 62 (1994): 1041–1063.
- Weibull, Jörgen W. *Evolutionary Game Theory.* MIT Press, 1997.