

Bavarian Graduate Program in Economics (BGPE)
A Course on Game Theory and Information Economics
August 9 - August 14, 2015

Zvika Neeman

Course Outline

The course provides a short introduction to game theory and to the field known as “information economics.” Topics covered include normal and extensive form games, with complete and incomplete information, and the classical results of information economics including moral hazard and adverse selection, signaling and screening. Many examples, both abstract and more applied will be presented.

Please note that the course will start on Sunday, August 9, in the evening with a welcome meeting at 19:00 followed by dinner.

The **Final Examination** will take place on September 9, 2015.

Prerequisites The course is self contained. Basic knowledge of probability and calculus is assumed.

Tentative Lecture Plan

Sunday (9/8) Brief Introduction

19:00-19:30 Brief Introduction

19:30- Dinner

Monday (10/8) Strategic Form Games

7:00-9:30 Breakfast

9:30-10:45 *Lecture 1: Dominant Strategies*

10:45-11:00 Coffee break

11:00-12:15 *Lecture 2: Successive Elimination of Strictly Dominated Strategies*

12:15-14:00 Lunch

14:00-15:15 *Lecture 3: Nash Equilibrium*

15:15-15:45 Coffee break

15:45-17:00 *Lecture 4: Existence of Nash Equilibrium*

17:00-19:00 Free time

19:00- Dinner

Tuesday (11/8) Extensive Form Games

7:00-9:30 Breakfast

9:30-10:45 *Lecture 5: Backwards Induction*
10:45-11:00 Coffee break
11:00-12:15 *Lecture 6: Subgame Perfect Equilibrium*
12:15-14:00 Lunch
14:00-15:15 *Lecture 7: Rubinstein's Model of Alternating Offer Bargaining*
15:15-15:45 Coffee break
15:45-17:00 *Lecture 8: Repeated Games*
17:00-19:00 Free time
19:00- Dinner

Wednesday (12/8) Games with Incomplete Information

7:00-9:30 Breakfast
9:30-10:45 *Lecture 9: Sequential Rationality*
10:45-11:00 Coffee break
11:00-12:15 *Lecture 10: Bayesian Games*
12:15-14:00 Lunch
14:00-15:15 *Lecture 11: Auctions with Private Values*
15:15-15:45 Coffee break
15:45-17:00 *Lecture 12: Revenue Equivalence*
17:00-19:00 Free time
19:00- Dinner

Thursday (13/8) More Games with Incomplete Information

7:00-9:30 Breakfast
9:30-10:45 *Lecture 13: The Winner's Curse*
10:45-11:00 Coffee break
11:00-12:15 *Lecture 14: Mechanism Design: Bilateral Trade*
12:15-14:00 Lunch
14:00-15:15 *Lecture 15: Bad Reputation*
15:15-15:45 Coffee break
15:45-17:00 *Lecture 16: Moral Hazard*
17:00-19:00 Free time
19:00- Dinner

Friday (14/8) Information Economics

7:00-9:30 Breakfast
9:30-10:45 *Lecture 17: Adverse Selection*
10:45-11:00 Coffee break
11:00-12:15 *Lecture 18: Signaling*
12:15-14:00 Lunch

14:00-15:15 *Lecture 19: Screening*