



Course and Examination Fact Sheet: Spring Semester 2018

8,250: Advanced Microeconomics III: Game Theory

ECTS credits: 4

Overview examination/s

(binding regulations see below)

Decentral - Written examination (70%, 90 mins.)

Decentral - examination paper written at home (individual) (30%)

Attached courses

Timetable -- Language -- Lecturer

[8,250,1.00 Advanced Microeconomics III: Game Theory](#) -- Englisch -- [Bühler Stefan](#)

Course information

Course prerequisites

Microeconomics III (Bachelor)

Course content

Game Theory is the lingua franca of modern behavioral and social sciences. In particular, game theory is an indispensable tool for the economic analysis of strategic interaction. This course refreshes and builds on material that students have learned in their bachelor studies. The goal of this course is to enable students to independently describe and analyze settings with strategic interaction using the tools of modern game theory. We will meet every week in class. In each class, we discuss the key concepts, solve exercises, or conduct classroom experiments to immerse ourselves in the material.

In this course, students

1. learn how to describe strategic interaction,
2. familiarize themselves with the most important solution concepts,
3. gain practice in solving game-theoretic problems,
4. learn how to think strategically within and beyond the classroom.

Students will have to submit two problem sets that are graded. There is a final written exam.

Course structure

Course Structure

We will meet every week in class. In each class, we discuss the key concepts, solve exercises, or conduct classroom experiments to immerse ourselves in the material.

Tentative Structure (subject to change):

Static Games of Complete Information

1. Brush Up



2. Supermodular Games

Dynamic Games of Complete Information

3. Brush Up
4. Multistage Games
5. Repeated Games I
6. Repeated Games II

Static Games of Incomplete Information

7. Brush Up
8. Exercises

Dynamic Games of Incomplete Information

9. Brush Up
10. Reputation
11. Cheap Talk

Course literature

Main text:

Tadelis, S. (2013), *Game Theory: An Introduction*, Princeton University Press.

Journal Articles:

Amir, R. (2005), Supermodularity and Complementarity in Economics: An Elementary Survey, *Southern Economic Journal* 73(3), 636-660.

Vives, X. (2005), Games with strategic complementarities: New applications to industrial organization, *International Journal of Industrial Organization* 23, 625-637.

Other useful texts:

Brams, S.J., (2011), *Game Theory and the Humanities: Bridging Two Worlds*, MIT Press.

Fudenberg, D., Tirole, J. (1993), *Game Theory*, MIT Press.

Gibbons, R. (1992), *Game Theory for Applied Economists*, Princeton University Press.

Mailath, G.J., Samuelson, L. (2006), *Repeated Games and Reputations*, Oxford University Press

Mas-Colell, A., Whinston, M.D., Green, J.R. (1995), *Microeconomic Theory*, Oxford University Press; Chapters 7-9.

Osborne, M.J., Rubinstein, R. (1994), *A Course in Game Theory*, MIT Press.

Tirole, J. (1988), *Theory of Industrial Organization*, MIT Press; Chapter 11.

Vega-Redondo, R. (2003), *Economics and the Theory of Games*, Cambridge University Press.

Additional course information

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Examination information

Examination sub part/s

1. Examination sub part (1/2)

Examination time and form

Decentral - Written examination (70%, 90 mins.)

Remark

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Examination-aid rule

Extended Closed Book

The use of aids is limited; any additional aids permitted are exhaustively listed under "Supplementary aids". Basically, the following is applicable:

- At such examinations, all the pocket calculators of the Texas Instruments TI-30 series and mono- or bilingual dictionaries (no subject-specific dictionaries) without hand-written notes are admissible. Any other pocket calculator models and any electronic dictionaries are inadmissible.
- In addition, any type of communication, as well as any electronic devices that can be programmed and are capable of communication such as notebooks, tablets, PDAs, mobile telephones and others, are inadmissible.
- Students are themselves responsible for the procurement of examination aids.

Supplementary aids

No additional aids allowed

Examination languages

Question language: English

Answer language: English

2. Examination sub part (2/2)

Examination time and form

Decentral - examination paper written at home (individual) (30%)

Remark

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Examination-aid rule

Term papers

- Term papers must be written without anyone else's help and in accordance with the known quotation standards, and they must contain a declaration of authorship.
- The documentation of sources (quotations, bibliography) has to be done throughout and consistently in accordance with the APA or MLA standards. The indications of the sources of information taken over verbatim or in paraphrase (quotations) must be integrated into the text in accordance with the precepts of the applicable quotation standard, while informative and bibliographical notes must be added as footnotes (recommendations and standards can be found, for example, in METZGER, C. (2015), *Lern- und Arbeitsstrategien* (11th ed., 4th printing). Aarau: Sauerländer).
- For any work written at the HSG, the indication of the page numbers both according to the MLA and the APA standard is never optional.
- Where there are no page numbers in sources, precise references must be provided in a different way: titles of chapters or sections, section numbers, acts, scenes, verses, etc.
- For papers in law, the legal standard is recommended (by way of example, cf. FORSTMOSER, P., OGOREK R. et SCHINDLER B. (2014, *Juristisches Arbeiten: Eine Anleitung für Studierende* (5. Auflage), Zürich: Schulthess, or the recommendations of the Law School).



Supplementary aids

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Examination languages

Question language: English

Answer language: English

Examination content

Lecture notes (slides); chapters of Tadelis (2013) covered in the lectures (indicated on slides); Papers covered for supermodular games (indicated on slides); all problem sets; all classroom experiments and discussions. Students will be asked to solve game-theoretic problems in the exam.

Examination relevant literature

Lecture notes (slides); chapters of Tadelis (2013) covered in the lectures (indicated on slides); Papers covered for supermodular games (indicated on slides); all problem sets; all classroom experiments and discussions. Deadline for all these materials is the last lecture on May 14, 2018.

Please note

We would like to point out to you that this fact sheet has absolute priority over other information such as StudyNet, faculty members' personal databases, information provided in lectures, etc.

When will the fact sheets become binding?

- Information about courses and examination time (central/decentral and grading form): from the start of the bidding process on 25 January 2018
- Information about decentral examinations (examination-aid rule, examination content, examination relevant literature): after the 4th semester week on 19 March 2018
- Information about central examinations (examination-aid rule, examination content, examination relevant literature): from the start of the enrolment period for the examinations on 09 April 2018

Please look at the fact sheet once more after these deadlines have expired.