

Introduction to Game Theory

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Summer Term 2017

Summary

Games are a popular tool to help our understanding of cooperation, conflict, rationality and decision making. In this course we study basic games and game-theoretic concepts and investigate how they help us understand the world. There are no formal requirements to take this course other than some affinity to mathematical/formal analysis.

Assessment

Assessment: 50% presentation, 40% long essay, 10% short essay.

Topic of presentation and long essay are chosen by the student.

It makes sense to present and write about the same topic.

Deadline for short essay submission: Friday, 16. June 2017, in class

Please, write on Nash Equilibria: what you like about them, what you do not like and how engaging with the literature has shaped your opinion.

Roughly one page, 2 - 3 references. **No references = No marks = FAIL.**

Presentations are mainly assessed with respect to the communication of ideas / concepts / arguments. Please format as .pdf-files.

Deadline for long essay submission: Friday, 22. Sep. 2017

Essays should be around 10 pages (20,000 characters), clearly structured, contain

a well-argued for original philosophical claim, and refer to relevant literature.
An essay is submitted, AFTER I confirm the receipt via email. After I confirm the submission, it will still take me some time before I read and grade your work.
No references = No marks = **FAIL**

Week by Week

Week 1: Introduction

Suggested Readings:

Any introduction on game theory, for example Chapter 1 of <http://home.ku.edu.tr/lkockesen/teaching/econ333/lectnotes/uggame.pdf>

Week 2: Decision Making

Suggested Readings:

[SEP on Decision Theory](#)

[Savage \(1972\)](#)

<http://www.econ2.jhu.edu/people/Karni/savageeu.pdf>

Week 3: Nash Equilibria

Anything on Nash equilibria, for example Chapters 2 and 3 of <http://home.ku.edu.tr/lkockesen/teaching/econ333/lectnotes/uggame.pdf>

Week 4: A Beautiful Mind'

Post a 3 paragraph piece on the “equilibrium” scene (positives, negatives, your opinion) to the Nash thread.

In case you encounter technical difficulties, please email me.

Week 5: Webinar at 14:15-15:45.

Read things which tackle your fancy on Nash Equilibria. Short essay due in 3 weeks.

Week 6: No class!

Week 7: Stability in Space

Suggested Reading: [Hotelling \(1929\)](#), check out this [YouTube Video](#).

Get serious with the short essay.

Week 8: Games with incomplete information.

Suggested Readings: [Harsanyi \(1967, 1968a,b\)](#)

Short essay due in class.

Week 9: Bargaining

Suggested Readings: <http://faculty.georgetown.edu/la2/Bargaining.pdf>, Chapter 8

of <http://home.ku.edu.tr/lkockesen/teaching/econ333/lectnotes/uggame.pdf>, Nash (1950, 1953)

Week 10: Human Behaviour

Suggested Reading: [Haley and Fessler \(2005\)](#)

Week 11: Ethics and Gametheory

Suggested Reading: ([Luetge and Mukerji, 2016](#), Intro & Chapter 16)

Week 12: No class!

Week 13: Student Presentations

Marked.

Week 14: Student Presentations

Marked.

References

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- Nash, J. (1953). Two-Person Cooperative Games. *Econometrica*, 21(1):128–140.
- Nash, J. F. (1950). The Bargaining Problem. *Econometrica*, 18(2):155–162.
- Savage, L. J. (1972). *The Foundations of Statistics*. Dover Publications, 2nd edition.