

Game Theory

0. Organizational Matters

Albert-Ludwigs-Universität Freiburg



Bernhard Nebel and Robert Mattmüller

Summer semester 2019

1 About the Course



About the Course

Rules

People



About the Course

Rules

Lecturers

Prof. Dr. Bernhard Nebel

- **email:** nebel@informatik.uni-freiburg.de
- **office:** room 052-00-029

Dr. Robert Mattmüller

- **email:** mattmuel@informatik.uni-freiburg.de
- **office:** room 052-00-042

People



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Exercises

Tim Schulte

- **email:** schultet@informatik.uni-freiburg.de
- **office:** room 052-00-044

Davif Speck

- **email:** speckd@informatik.uni-freiburg.de
- **office:** room 052-00-030

Lectures

- **time:** Tuesday 16:15-17:45, Thursday 15:00-15:45
- **place:** building 101, seminar room 00-026

Exercises

- **time:** Thursday 14:15-15:00
- **place:** building 101, seminar room 00-026

Course website

<http://gki.informatik.uni-freiburg.de/teaching/ss19/gametheory/>

- **main page:** course description
- **lecture page:** slides, lecture notes
- **exercise page:** assignments, software

- **Osborne & Rubinstein.**
A Course in Game Theory.
Main source for the first half of this course. Quite formal.
- **Osborne.**
An Introduction to Game Theory.
Similar content as Osborne & Rubinstein, but less formal.
- **Nisan, Roughgarden, Tardos, & Vazirani.**
Algorithmic Game Theory.
Main source for the second half of this course

- lecture notes in English and German:
 - **en:** http://gki.informatik.uni-freiburg.de/teaching/ss18/gametheory/gametheory_en.pdf
 - **de:** http://gki.informatik.uni-freiburg.de/teaching/ss18/gametheory/gametheory_de.pdf(PDFs updated regularly)
- open \LaTeX sources (read-only):
<https://gkigit.informatik.uni-freiburg.de/teaching.gametheory/gametheory-lecturenotes/tree/master>
You may use and modify them. If you improve them, we are happy to include and acknowledge your contributions.
- slides available on course website
- additional resources: literature list on course website + **ask us!**

2 Rules



About the
Course
Rules

Target Audience



About the
Course
Rules

Students of Computer Science:

- Master of Science, any year
- Bachelor of Science, ~3rd year

Other students:

- advanced study period (~4th year)

Prerequisites



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Course prerequisites:

- no formal required prerequisites
- some familiarity with mathematical notation and theoretical computer science is helpful, familiarity with Python 3 is assumed for the exercises.

Credit Points & Exam



About the
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Rules

- 6 ECTS points
- special lecture in specialization field
[Cognitive Technical Systems](#)
- [oral exam](#) of about 30 minutes for B.Sc. students
- [written or oral exam](#) for M.Sc. students (likely written)

Written assignments:

- handed out once a week
- due one week later, before the lecture
- discussed in the next exercise session
- may be solved in groups of up to three students
- 8 points per exercise sheet

Didactic web-based experiments in game theory:

- See <http://gametheory.tau.ac.il/>.
- course number and class password will be sent by email
- experiments conducted intermittently (three to five times throughout course)
- about one week time to complete
- discussed in the next exercise session
- must be solved alone (not in groups)
- 4 points per set of experiments

You can take the exam **without any prerequisite!**

However, you also have to acquire a **Studienleistung**:

- Points can be earned for “reasonable” solutions to exercises and for participation in web-based experiments.
- At least 50% of points prerequisite for acquiring the Studienleistung.

What is plagiarism?

- Passing off solutions as your own that are not based on your ideas (work of other students, Internet, books, ...)
- <http://en.wikipedia.org/wiki/Plagiarism> is a good intro

Consequence: no Studienleistung!

- We may (!) be generous on first offense.
- Don't tell us “We did the work together.”
- Don't tell us “I did not know this was not allowed.”