Game Theory
0. Organizational Matters

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1 About the Course

About the Course

Rules

People

Lecturers
Prof. Dr. Bernhard Nebel
- email: nebel@informatik.uni-freiburg.de
- office: room 052-00-029

Dr. Robert Mattmüller
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- office: room 052-00-030

Exercises
Tim Schulte
- email: schultet@informatik.uni-freiburg.de
- office: room 052-00-044

N.N.
About the Course

Time & Place

Lectures
- **time:** Monday 16:15-17:00, Wednesday 14:15-16:00
- **place:** building 101, seminar room 01-009/013

Exercises
- **time:** Monday 17:15-18:00
- **place:** building 101, seminar room 01-009/013

Teaching Materials: Books

- 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

Website

Course website
- **http://gki.informatik.uni-freiburg.de/teaching/ss18/gametheory/**
  - **main page:** course description
  - **lecture page:** slides, lecture notes
  - **exercise page:** assignments, software

Teaching Materials: Lecture Notes and Slides

- **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!
Target Audience

Students of Computer Science:
- Master of Science, any year
- Bachelor of Science, ~3rd year

Other students:
- advanced study period (~4th year)

Prerequisites

Course prerequisites:
- no 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

- 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)
Exercises

Successful participation (50% of points) prerequisite for exam admission.

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

Admission to Exam

points can be earned for “reasonable” solutions to exercises and for participation in web-based experiments.

at least 50% of points prerequisite for admission to final exam.

Plagiarism

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 admission to the final exam.
- 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.”