Discrete Mathematics in Computer Science

A1. Organizational Matters

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University of Basel

September 16, 2020

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A1.1 Organizational Matters

A1.2 About this Course

A1.1 Organizational Matters

People

Malte Helmert

Gabriele Röger

Lecturers

Malte Helmert

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- office: room 06.004, Spiegelgasse 1

Gabriele Röger

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- office: room 04.005, Spiegelgasse 1

People

Assistant

Salomé Eriksson

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- office: room 04.002, Spiegelgasse 1

Tutors

Augusto B. Corrêa

- email: augusto.blaascorrea@unibas.ch
- office: room 04.001, Spiegelgasse 5

Florian Pommerening

- email: florian.pommerening@unibas.ch
- office: room 04.005, Spiegelgasse 1

Time & Place

Lectures

- most of the lectures will be asynchronous (pre-recorded)
- recapitulation and Q&A on Zoom every Wednesday 16:15
  $\rightarrow$ Q&A session for exam preparation on December 16

Time & Place

Exercise Sessions on Zoom (starting September 30)

Wednesday: 17:15–18:00

- group 1 (Augusto B. Corrêa; in English)
- group 2 (Florian Pommerening; in German)

important: please send Gabi an email with your preferred language until Monday 23:59 (September 21).

On Sep 23 17:15-18:00 there will be an introduction to LaTeX.

Enrolment

- `https://services.unibas.ch/`
- deadline: October 12
- better today, so that you get all relevant emails and access to the ADAM workspace

Discrete Mathematics Course on the Web

Course Homepage

`https://dmi.unibas.ch/en/discrete-mathematics-in-computer-science/`

- course information
- slides

Discrete Mathematics Course on ADAM

ADAM

`https://adam.unibas.ch/`

- learning modules
- submission of exercise sheets
- model solutions for exercise sheets
- forum for announcements and questions
  (followed by lecturers, assistant and tutors)
- link to discord server (for interaction among participants)

Target Audience

target audience:

- this is an introductory course on the Bachelor's level
- we cover mathematical foundations that are particularly useful for the computer science curriculum
- main target audience: B.Sc. Computer Science, 3rd semester
- all other students welcome

prerequisites:

- basic programming skills

Exam

- 6 ECTS credits
- no physical exam; exact setup still to be determined
- Monday January 25, 4-6pm
- admission to exam:
  - must pass the weekly assignments;
    up to two failed assignments are allowed
  - you pass a weekly assignment with $\geq 60\%$ of the marks
- grade for course determined exclusively by the exam

Exercises

Exercise sheets (homework assignments):

- mostly theoretical exercises
- some programming exercises

Exercise sessions:

- questions about exercise sheets
- questions about the course
- participation voluntary but recommended

Exercises

- exercise sheets on Adam every Monday
- must be solved in groups of two ($1 \neq 2 \neq 3$)
- due Monday the following week
  (upload to Adam at `https://adam.unibas.ch/`)
- we only accept PDFs created with LaTeX.
  Pictures may only be included if appropriate, not for creating a submission from photos of handwritten solutions.

Plagiarism

Plagiarism (Wikipedia)

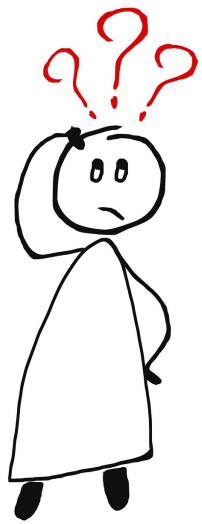
Plagiarism is the "wrongful appropriation" and "stealing and publication" of another author's "language, thoughts, ideas, or expressions" and the representation of them as one's own original work.

consequences:

- 0 marks for the exercise sheet (first time)
- exclusion from exam (second time)

if in doubt: check with us what is (and isn't) OK before submitting exercises too difficult? we are happy to help!

Questions on Organization



Questions?

A1.2 About this Course

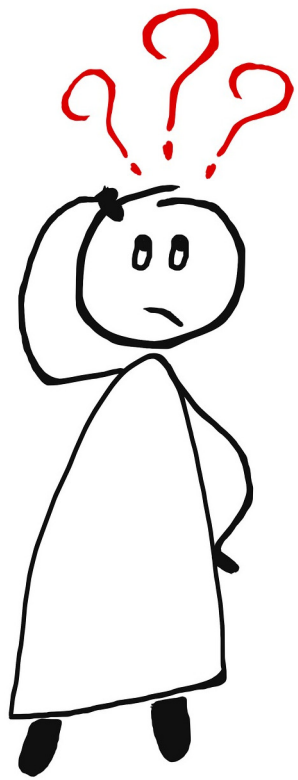
Content: Discrete Mathematics in Computer Science

- mathematical thinking and proof techniques
- group theory and permutations
- sets and relations
- graphs and trees
- modular arithmetic
- recurrence relations
- formal logic

Learning Goals

- proficiency in abstract thinking
- ability to formalize mathematical ideas and arguments
- knowledge of common mathematical tools in computer science

Questions about the Course



Questions?