Discrete Mathematics in Computer Science

A1. Organizational Matters

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A1.1 Organizational Matters

A1.2 About this Course

A1.1 Organizational Matters

People

Malte Helmert

Gabi Röger

Lecturers

Malte Helmert

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Gabi Röger

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People

Assistant

Salomé Eriksson

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Tutors

Patrick Ferber

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- office: room 04.005, Spiegelgasse 1

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:

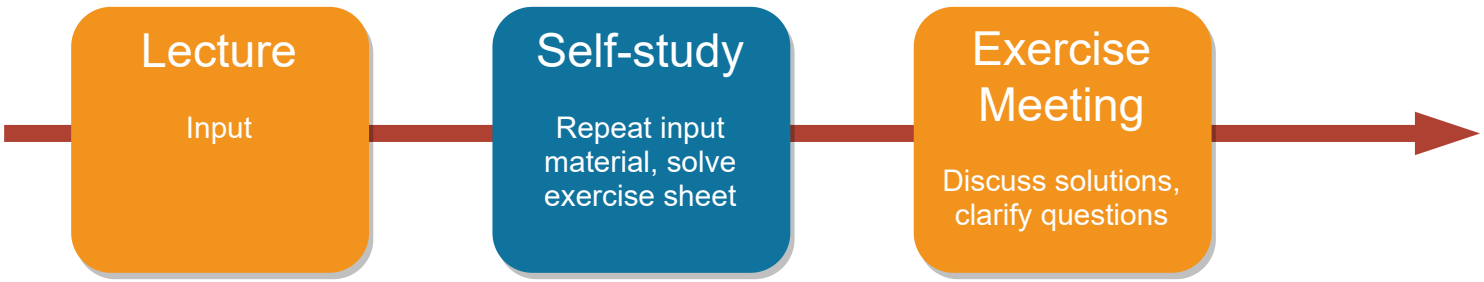
- basic programming skills

We use Slido

Join at slido.com

Flipped Classroom

Usual lecture week (we don't do this):



Flipped classroom:

Enrolment

- `https://services.unibas.ch/`
- deadline: October 18
- better today, so that you get all relevant emails and access to the ADAM workspace

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,
  but you also get answers from lecturers, assistant and tutors)

Plenary Meetings

- Wednesday 16:15 on Zoom
- with the lecturers
- bring your questions from the self-study phase
- on December 22: Q&A session for exam preparation

Exercises

Exercise sheets (homework assignments):

- mostly theoretical exercises
- some programming exercises
- exercise sheets on ADAM every Monday
- must be solved in groups of three ($2 \neq 3 \neq 4$)
- due Thursday 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.

Exercise Sessions

Exercise Sessions (starting September 27)

Monday: 16:15–18:00

- group 1: Vesalianum Seiteneingang, Grosser Hörsaal (EO.16)
- group 2: on Zoom

- questions about exercise sheets
- questions about the course
- support while you solve the exercises

→ slido for first impression of preferences

important: please send Salomé an email with your team of 3 and preferred group until Friday 16:00 (September 24).

Exam

- 6 ECTS credits
- Monday, 24 January 2022, 4-6 p.m. (TBC)
- 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

Required Time

- 1 CP $\approx$ 30 hours
- The course has 6 CP.
- You need to invest about 180 hours.
- With 40 hours for exam preparation,
  this leaves 10–11 hours/week during the teaching period.

Required Time

How to distribute the 10–11 hours/week? – an example

- 4 hours self-studying of input material (learning module)
- 2 hours exercises on Monday
- 2 hours plenum on Wednesday
- 2.5 hours additional time for homework

Plagiarism

Plagiarism (Wikipedia)

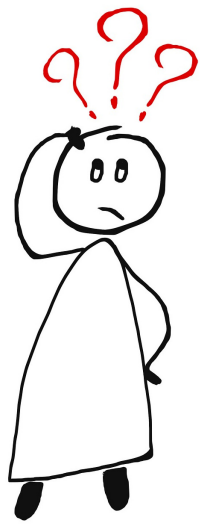
Plagiarism is the "wrongful appropriation" and "stealing and publication" of another author's "language, thoughts, ideas, or expressions" and the representation of them as one's own original work.

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

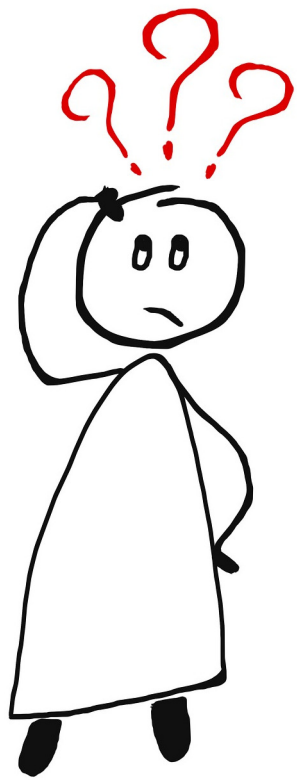
Content: Discrete Mathematics in Computer Science

- 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?

Your next Steps

- until Sep. 24, 16:00 form a team for the exercises and send Salomé an email with your preference regarding physical/online
- until Sep. 26 study the material on A2 in the learning module
- Sep. 27–Oct. 3 study the material on A3 and B1
- Sep. 27 exercise session on A2
- Sep. 29 plenary meeting on A2
- Sep. 30 due date ex. sheet 1