# Discrete Mathematics in Computer Science
## A1. Organizational Matters

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— A1. Organizational Matters

## A1.1 Organizational Matters

## A1.2 About this Course

# A1.1 Organizational Matters

## People

### Lecturers



Malte Helmert

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▶ office: room 06.004, Spiegelgasse 1



Gabi Röger

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### Assistant



Florian Pommerening

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## People

> ### Tutors
>
> Clemens Büchner
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> Salomé Eriksson
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> Simon Dold
>
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> - ► office: room 04.001, Spiegelgasse 5

## 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

# Flipped Classroom

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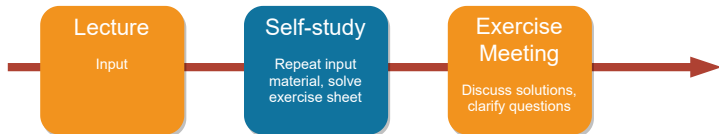


Flipped classroom:

## Enrolment

▶ https://services.unibas.ch/
▶ deadline: October 17
▶ 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
- ▶ link to Discord server (for interaction among participants, but you also get answers from lecturers, assistant and tutors)

## Plenary Meetings

▶ Wednesday 16:15-18:00, Lecture hall U1.141, Biozentrum
▶ with the lecturers
▶ bring your questions from the self-study phase
▶ on December 21: 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.
Question: Who has experience with LaTeX?

## Exercise Sessions

> **Exercise Sessions (starting September 26)**
>
> **Monday:** 16:15–18:00
>
> ▶ group 1: Lecture hall -101, Alte Universität, with Clemens
> ▶ group 2: Seminar room 00.003, Spiegelgasse 1, with Salomé
> ▶ group 3: Seminar room 05.001, Spiegelgasse 5, with Simon

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

**important:** please send Florian an email with your team of 3
until Friday 16:00 (September 23).

## Exam

- ▶ Written exam
- ▶ 6 ECTS credits
- ▶ Monday, 23 January 2023, 16:00-18:00
- ▶ Lecture hall U1.131, Biozentrum
- ▶ admission to exam: 50% of the exercise 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



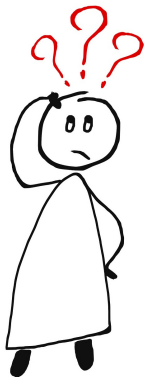Questions?

# 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. 23, 16:00 form a team for the exercises and send Florian an email
- ▶ until Sep. 26, 16:00 study material on A2 in learning module
- ▶ Sep. 26–Oct. 3, 16:00 study material on A3 and B1
- ▶ Sep. 26 exercise session on A2
- ▶ Sep. 28 plenary meeting on A2
- ▶ Sep. 29 due date ex. sheet 1