

Discrete Structures

A1. Organizational Matters

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University of Basel

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People

Lecturers



Malte Helmert

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Gabi Röger

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Assistant



Tanja Schindler

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People



Tutors

- ▶ Maria Desteffani (maria.desteffani@unibas.ch)
- ▶ Pascal von Fellenberg (pascal.vonfellenberg@unibas.ch)
- ▶ Shashwat Kumar (kumar.shashwat@unibas.ch)
- ▶ Tobias Aschwanden (tobias.aschwanden@unibas.ch)

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, 1st semester
- ▶ all other students welcome

Content: Discrete Structures

- ▶ mathematical thinking and proof techniques
- ▶ sets and relations
- ▶ group theory and permutations
- ▶ modular arithmetic
- ▶ graphs and trees
- ▶ 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

Relationship to Previous Course

- ▶ original course [Discrete Mathematics in Computer Science](#)
- ▶ with 6 CP, 3h lecture & 1h exercise per week
- ▶ originally taught in 3rd semester
- ▶ had to remove material when it was moved to the 1st semester in 2023
- ▶ this year: reintroducing the material

If you already got credit for Discrete Mathematics in CS, you cannot again get credit for Discrete Structures.

Enrolment

- ▶ `https://services.unibas.ch/`
- ▶ [official deadline](#): October 12
- ▶ actually today, so that you get all relevant emails and access to the ADAM workspace

Discrete Structures Course on ADAM

ADAM

<https://adam.unibas.ch/>

- ▶ link to website with slides
- ▶ 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)
- ▶ additional material

Language

- ▶ The course is taught in English.
- ▶ All lecture material is in English.
- ▶ We (lecturers, assistant) speak German and English.
- ▶ You are also welcome to ask questions in German.
- ▶ Exercise submissions are usually in English but can be in German depending on the exercise session.

Lectures

- ▶ Monday and Wednesday 16:15–18:00, Hörsaal U1.131, Biozentrum
- ▶ first half of the course taught by Gabi Röger, second half by Malte Helmert
- ▶ on December 16: Q&A session for exam preparation

Exercises

Exercise sheets (homework assignments):

- ▶ must be solved in **groups of two or three** (not alone or in larger groups)
- ▶ mostly theoretical exercises
- ▶ exercise sheets on ADAM every Monday after the lecture
- ▶ have questions or need help?
 $\rightsquigarrow$ assistance provided in Thursday/Friday exercises
- ▶ due on the following Sunday (23:59)
 (upload to ADAM at <https://adam.unibas.ch/>)
- ▶ we only accept readable PDFs
 $\rightarrow$ ideally prepared with $\text{\LaTeX}$
 (template, cheat sheet and intro on ADAM)

Question: Who has experience with $\text{\LaTeX}$?

Exercise Sessions With Tutors

Exercise Sessions (starting September 24/25)

Thu 16:15–18:00	Spiegelgasse 1, room 00.003 with Shashwat
Thu 16:15–18:00	Spiegelgasse 5, room 05.001 with Maria
Fri 10:15–12:00	Kollegienhaus, room 107 with Tobias
Fri 10:15–12:00	Spiegelgasse 1, room U1.001 with Pascal

- ▶ common mistakes/misconceptions (full model solutions on ADAM)
- ▶ questions about exercise sheets and the course
- ▶ support while you solve the exercises
- ▶ oral feedback on your past homework (on request)

important: please fill in the survey on ADAM for the group allocation until **Friday 12:00** (September 18).

Exam

- ▶ Written exam
- ▶ January 18, 2027, 16:00-18:00
- ▶ Maurice E. Müller Saal, Biozentrum
- ▶ 8 ECTS credits
- ▶ admission to exam: 50% of the exercise marks
- ▶ grade for course determined exclusively by the exam
- ▶ no repeat exam (except in case of illness)

Plagiarism

Plagiarism is presenting someone else's work, ideas, or words as your own, without proper attribution.

For example:

- ▶ Using someone's text without citation
- ▶ Paraphrasing too closely
- ▶ Using information from a source without attribution
- ▶ Passing off AI-generated content as your own original work

Long-term impact:

- ▶ You undermine your own learning.
- ▶ You start to lose confidence in your ability to think, write, and solve problems independently.
- ▶ Damage to academic reputation and professional consequences in future careers

Plagiarism in Exercises

- ▶ You may discuss material from the course, including the exercise assignments, with your peers.
- ▶ **But:** You have to independently write down your exercise solutions (in your team).
- ▶ AI support is acceptable to the same extent as it is acceptable from someone who is not a member of your team.

Consequences of clear plagiarism:

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

You are jointly responsible for your submission as a team.

Inconclusive Cases

If a tutor has serious doubts

- 1 The solution receives **0 marks initially**.
- 2 This is a **temporary assessment**, not a final accusation of plagiarism.
- 3 If you did not plagiarise, take it as a compliment.
Your solution was probably exceptionally good.

How to get the marks

- 1 Come to your next exercise session.
- 2 Explain your solution and reasoning to your tutor.
- 3 If you can demonstrate that you understand the solution,
the marks are awarded.

Exercises too difficult? We are happy to help!

Special Needs?

- ▶ We (and the university) strive for equality of students with disabilities or chronic illnesses.
- ▶ Contact the lecturers for small adaptations.
- ▶ Contact the Students Without Barriers (StoB) service point for general adaptations and disadvantage compensation.