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Important information about Zoom recordings

This preliminary meeting will be recorded.

Questions can be asked on site or via public chat not recorded.

Avoid disclosing private data in the chat (including speeches such as @Franz Maier).

Do not use your microphone or camera or you will also recorded.

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ADS 051024

Algorithms and data structures 1

VU - 6 ECTS (4 SWS)

Sonja Biedermann BSc
Ass.-Prof. Mag. dr. Martin Polaschek
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Dipl.-Ing. Helmut Wanek

FG Workflow Systems and Technology
FG Theory and Applications of Algorithms
Faculty of Computer Science, University of Vienna
WS 2023

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Administrative

All information about the course https://cewebs.cs.univie.ac.at/algodat/ws23

Username: u:space-UserID
Password: u:space-Password

Target group:

Students of the bachelor's degree in computer science (A 033 521 version 2016), business informatics (A 033 526 version 2016) and the computer science teaching qualification (A/E 884, A053, A414)

2nd semester Bachelor; 4th semester of teaching

Registration, grades via U:SPACE:

https://uspace.univie.ac.at

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Admission and deregistration (1)

All students of the bachelor's programs in computer science (A 033 521) and business informatics (A 033 526) and the computer science teaching program (A/E 884, A053, A414) were accepted provided they meet the mandatory requirements.

Students from other fields of study who meet the requirements will also be admitted depending on the available places.

If the requirements are not met, you will not be accepted into this course.

Deregistration is possible until October 14, 2023.

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Admission and deregistration (2)

In order to secure your space claim, you must confirm your registration on the website by October 14, 2023 (menu item “ Confirm registration” on CEWebS).

Anyone who has not confirmed their registration by October 14, 2023 will be deregistered by the course management

All students who are still registered as of October 15, 2023 will be assessed.
(Exception: serious reasons such as long-term illness, which must be reported to the LV management immediately)

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VU Algorithms and Data Structures 1: Structure

The VU is divided into:

- Lecture part:
  There are no lectures in the winter semester. If necessary, the knowledge can be acquired through self-study.

- Internship part:
  The knowledge acquired is put into practice in the form of a small project in which one of the data structures presented in the lecture part is implemented.

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Exercise part

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Care

LV leader

Sonja Biedermann
Ass.-Prof. Mag. dr. Martin Polaschek
Dipl.-Ing. Ralph Vigne
Dipl.-Ing. Helmut Wanek

Recordings of the programming lectures from the previous semester are available as a stream.

Post questions in the forum. Email address in U:SPACE or CEWebS must **be current!**

form of exercise

Individual work project

Development of topics in the area of “Algorithms and Data Structures" in three steps

- Implementing a data structure (insert and search)
- Full implementation (deletion and iterators)
- Performance testing and optimization

Choose the topic independently

- The number of points achievable depends on the complexity of the topic

Implementation details (exact interface description, etc.) can be found on the CEWebS page.

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Important dates (can be viewed on the website)

1. **Preliminary meeting (02.10.)**
2. **Topic selection (no later than November 6th 11:59 p.m. on the website)**
3. **Written test (November 7th 9:00 a.m. – November 10th 6:00 p.m.) as a take home exam 4. First submission (November 13th 11:59 p.m.; online)**
5. **Second submission (November 27th 11:59 p.m.; online)**
6. **Final project exam (December 7th 9:45 a.m. - 12:45 p.m. PC laboratories)**
7. **Theoretical exam for the lecture part (11.12. 3:00 p.m. - 4:30 p.m. HS1) 8.**
    1. **Night appointment**

        Final project exam (January 11, 9:45 a.m. - 12:45 p.m. PC laboratories)

        Theoretical exam for the lecture part (January 15, 3:00 p.m. - 4:30 p.m. HS1)
9. **2nd night appointment in the second half of February**

Attendance is mandatory **for all dates marked in red !**

See the LV website “Dates” section

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Written test November 7th 09:00 – 10.11. 6:00 p.m

The test is carried out as a take home exam. Accurate Instructions will be announced on the website before the test, where the information can also be downloaded and the solutions can be uploaded during the test.

Knowledge of the selected data structure will be tested. The typical processes (such as inserting/deleting) must be reproduced using concrete examples with paper and pen.

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Project final exam December 7th 09:45-12:45 PC labs

The uploaded solution must be adapted for an additional task on site.

For a positive overall assessment, an executable program that fulfills the task must be created.

Further dates will be on January 11th. and offered in the second half of February. (Also for the theoretical exam. It is possible to take the theoretical exam multiple times. The last one counts **Result.** In any case, **the prerequisite for taking the theoretical exam is a positive completion of the final project exam.)**

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assessment

100 points can each be achieved for the lecture part and the exercise part.

For a positive assessment, at least 45 **points must be achieved in both parts** and the final exam must **be successfully completed.**

- **Lecture part:**

  Final exam with a maximum of 100 possible points

- **Exercise part:**

Written test	20 points
1st phase on time 2nd	10 points
phase on time Project	10 points
quality	xx points (depending on the chosen project)
d. implementation	10 points

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Nut scale

Points	Note
>= 175	very good (1)
>= 150	good (2)
>= 125	satisfactory (3)
>= 100	sufficient (4)
not < 100	sufficient (5)

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Last chance for questions

After the end of the preliminary meeting, NO more questions will be answered!