



Felix Friedrich, Ralf Sasse

# Computer Science

CSE Course at D-MATH of ETH Zurich

Autumn 2021

# Welcome

## **to the Course Informatik**

for CSE at the MAVT departement of ETH Zürich.

## **Place and time:**

Monday 08:15 - 10:00, ML E 12.

Pause 9:00 - 9:15, slight shift possible.

*First week: Wednesday 10:15 - 12:00 HG D1.2.*

## **Course web page**

`http://lec.inf.ethz.ch/math/informatik\_cse`

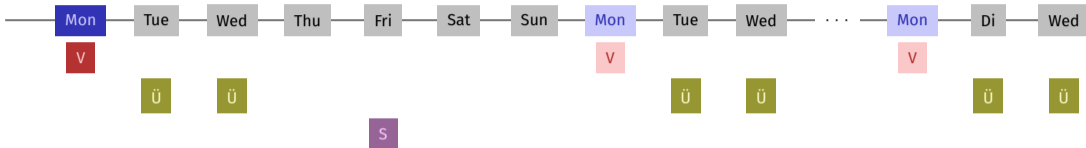
# Team

chef assistant Vytautas Astrauskas

assistants  
Marco Ancona  
Adel Gavranovic  
Ciril Humbel  
Manuel Kaufmann  
Samuel Russo

lecturers  
Dr. Felix Friedrich  
Dr. Ralf Sasse

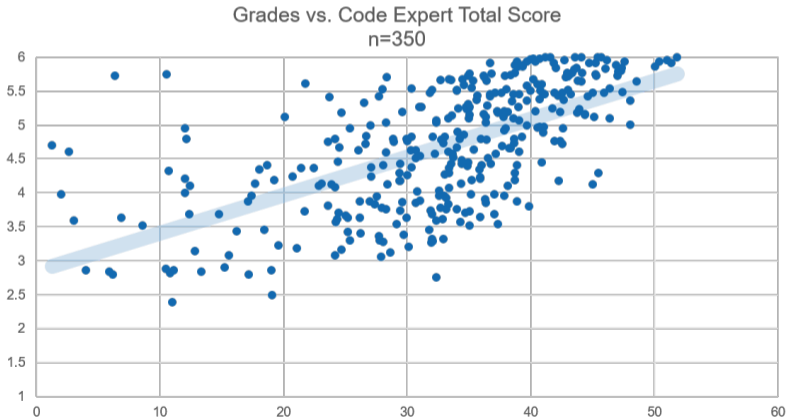
# Procedure



- Exercises available on Monday morning (online)
- Lecture on Monday
- Preliminary discussion in the following exercise session (on Tuesday/Wednesday)
- StudyCenter ([studycenter.ethz.ch](http://studycenter.ethz.ch))
- Solution must be submitted at latest on Monday in the following week (18:00h)
- Discussion of the exercise in the session one week after the submission. Feedback will be provided in the week after the submission.

# Exercises

- The solution of the weekly exercises is thus voluntary but strongly recommended.



# Online Tutorial

The image shows two browser windows side-by-side. The left window is Codeboard, displaying a C++ program in a file named 'main.cpp'. The code is as follows:

```
1 #include <iostream>
2
3 int main()
4 {
5     std::cout << "Hello World!" << std::endl;
6
7     return 0;
8 }
9
```

The output of the program is shown in a terminal window below the code editor: "Hello World!".

The right window is the E.Tutorial website, showing a progress bar at 24% and a section titled "Das erste C++ Programm" (Step 5 of 20). The text on the page reads: "Lassen Sie uns uns das Programm aus dem vorhergehenden Kapitel genauer untersuchen:". Below this, there are three lines of code with annotations:

```
1 #include <iostream> // Eingabe und Ausgabe verfügbar machen
2 int main() // Hauptfunktion - Hier startet das Programm
3 {
4     std::cout << "Hello World!" << std::endl; // Funktionskörper
5     return 0; // Beendet das Programm
6 }
```

At the bottom of the page, there is a button labeled "Code öffnen" (Open code).

For a smooth course entry we provide an online C++ tutorial  
Goal: leveling of the different programming skills.

Written mini test for your self assessment in the first exercise session.

⇒ work through the tutorial until next week

# Exams

The exam will cover

- Lectures content (lectures, handouts)
- Exercise content (exercise sessions, exercises).

Written exam at the computer.

We will test your practical skills (programming skills) and theoretical knowledge (background knowledge, systematics).

## Offer (VVZ)

- During the semester we offer weekly programming exercises that are graded. Points achieved will be taken as a bonus to the exam.
- The bonus is proportional to the score achieved in specially marked bonus tasks, where a full score equals a bonus of 0.25. The admission to specially marked bonus depends on the successful completion of other exercises. The achieved mark bonus expires as soon as the lecture is given anew.



## Offer (Concretely)

- 3 bonus exercises in total;  $\frac{2}{3}$  of the points suffice for the exam bonus of 0.25 marks
- You can, e.g. fully solve 2 bonus exercises, or solve 3 bonus exercises to 66% each, or ...
- Bonus exercises must be unlocked ( $\rightarrow$  experience points) by successfully completing the weekly exercises
- It is again not necessary to solve all weekly exercises completely in order to unlock a bonus exercise
- Details: course website, exercise sessions, online exercise system (Code Expert)

# Academic integrity

We encourage you explicitly to discuss solution ideas and approaches with your colleagues. Teamwork is important, also in computer science. It is, however, also important that you learn actively and do not only reproduce. Therefore:

## Rules

You submit only solutions that you have written yourself and that you have understood. Copy-paste is not erlaubt, neither are team implementations.

# Credits

- Lecture:
  - Original version by Prof. B. Gärtner and Dr. F. Friedrich
  - With changes from Dr. F. Friedrich, Dr. H. Lehner, Dr. M. Schwerhoff
- Script: Prof. B. Gärtner
- Code Expert: Dr. H. Lehner, David Avanthay and others