



Ralf Sasse, Felix Friedrich

# Computer Science

Course at D-MATH/D-PHYS at ETH Zurich

Autumn 2021

# Welcome

## **to the Course Informatik**

at the MATH/PHYS departement of ETH Zürich.

## **Place and time:**

Tuesday 14:15 - 16:00, HG F 7 und HG F 5 (Video).

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

## **Course web page**

<http://lec.inf.ethz.ch/ifmp>

# Team

**chef assistant**  
**assistants**

Vytautas Astrauskas

Elas Achler

Andrey Bryutkin

Wiona Sophie Glänzer

Pia Herkenrath

Han-Miru Kim

Damian Manetsch

Julia Meng

Henry Raymond

Seyed Sefidgar

Jérémie Stroschein

Vania Vicenzi

**lecturers**

Dr. Ralf Sasse

Manuel Braunschweiler

Tiziano De Matteis

Keanu Gleixner

Manuel Kansy

Hrvoje Krizic

Manuel Mekkattu

Christopher Otto

Börge Scheel

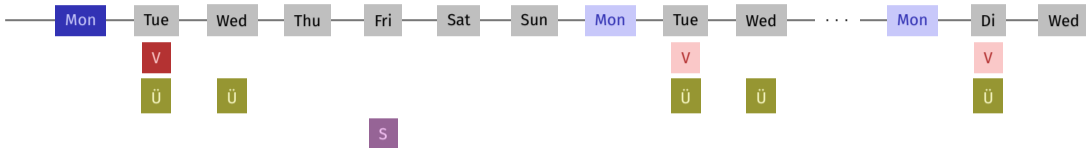
Jean-Pierre Smith

Sverrir Thorgeirsson

Eliza Wszola

Dr. Felix Friedrich

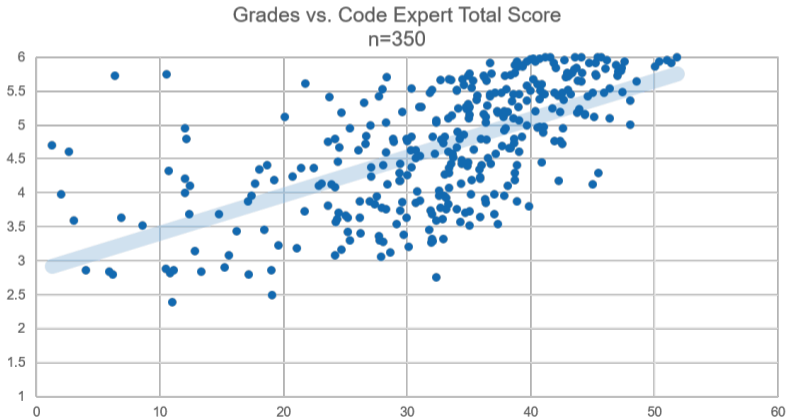
# Procedure



- Exercises available on Monday morning (online)
- Lecture on Tuesday
- 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 E.Tutorial, showing a page titled "Das erste C++ Programm" (The first C++ program), which is step 5 of 20. The page includes a progress bar at 24% and a table of contents. A red box highlights the following code snippet:

```
#include <iostream>
int main()
{
    std::cout << "Hello World!" << std::endl;
    return 0;
}
```

The text below the code explains the components: `#include <iostream>` for input/output, `int main()` as the main function, and `return 0;` as the function return value. A "Code öffnen" (Open code) button is visible at the bottom of the tutorial page.

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 second 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