Advanced Programming in C++

- 2/2 Z/Zk
- Lecture
  - mixture of lecturers
- Tutorials
  - every 2 weeks
  - 3 of them dedicated to 3 major homework assignments
    - *before*: assignment, explanation, hints
    - *after (the first two)*: evaluation, frequent errors, best solutions
  - the remaining tutorials: discussion/hints on topics of previous lectures
    - may include minor recodex assignments - voluntary, no points awarded
- The 3 major homework assignments
  - Deadlines 18 days after assignment
  - Up to 10 points per assignment
  - Late submission: -1 point per day

Credit

- at least 1 point from **each** assignment, and
- at least 15 points in total

Skipping the exam

- you may skip the exam if you have:
- at least 5 points from **each** assignment, and
- at least 19 points in total

Oral exam

- Credit required before exam
- ⇉ **±10 points**
  - beware: it may improve or worsen your result

Grading

- 27..30 points ⇉ **1**
- 23..26 points ⇉ **2**
- 19..22 points ⇉ **3**

Books

▸C++11/14/17/20/23
- en.cppreference.com/w/cpp

- Scott Meyers: Effective Modern C++ (C++11/C++14)
  - O'Reilly 2014
  - Methodology of programming

- Scott Meyers: Overview of the New C++ (C++11)
  - Collected slides
  - Motivation behind C++11 explained

- Bjarne Stroustrup: The C++ Programming Language - 4th Edition
  - Addison-Wesley 2013
  - Complete C++11 textbook

- David Vandevoorde, Nicolai M. Josuttis, Douglas Gregor:
  C++ Templates: The Complete Guide (2nd Edition)
  - Addison-Wesley 2017 (832 pages)

- Anthony Williams: C++ Concurrency in Action: Practical Multithreading
  - Manning Publications 2012 (528 pages)

- http://stackoverflow.com/questions/388242/the-definitive-c-book-guide-and-list

▸ Best practices – before C++11 = outdated but may be worth reading

- Andrei Alexandrescu, Herb Sutter:
  C++ Coding Standards (2005)

- Scott Meyers:
  Effective C++ (1998)
  More Effective C++ (1996)
  Effective STL (2001)

- Herb Sutter:
  Exceptional C++ (2000)
  More Exceptional C++ (2002)
  Exceptional C++ Style (2004)

- Nicolai M. Josuttis:
  Object-Oriented Programming in C++ (2002)