C++ Programming

Course Plan

EDAF50, study period VT1–2 2025.
7.5 hp.

Administrative Information

Welcome! In this course you will learn about C++ and study both the language and the standard library. An important part of the course is to use the differences between C++ and Java to illustrate some important programming concepts, and show aspects of program design that are built into the Java language, but where the C++ programmer has to make a choice. An informal goal of the course is to give participants the tools to become real C++ programmers, not Java programmers who know C++ syntax.

Prerequisites Taken *and passed* EDAA01 Programming–Second Course (or corresponding).

Course coordinator Sven Gestegård Robertz, office: E:4138 email: `sven.robertz@cs.lth.se`

Student expedition email: `expedition@cs.lth.se`

Canvas course Course material will be made available in Canvas. For questions, announcements, and discussion, the course will use Teams (see Canvas details on how to join).

Course literature Stanley B. Lippman, Josée Lajoie, Barbara E. Moo: *C++ Primer, fifth edition*, Addison Wesley, ISBN 978-0-321-71411-4. A very good book, everything is correct, a good reference, easier to read than Stroustrup. The reading advice in the lectures will be references to Lippman.

As long as you learn C++ you may use any book. An alternative is:

Bjarne Stroustrup: *The C++ Programming language, fourth edition*, Addison Wesley, ISBN 0-321-56384-0. Stroustrup is the inventor of C++. Not easy reading, but everything's there.

In addition to the textbook, there are additional resources from the department available in Canvas: the lecture slides, instructions for the computer labs and the project.

Course Content, Details

Course Contents

lectures	12
computer labs (compulsory)	4
project (compulsory)	1

Lectures First period: Mondays 10–12, and Wednesdays 13–15 (first two weeks).
Second period: Some mondays 10–12. Please note that the schedule is irregular, both in times and rooms, refer to the schedule.

See Canvas for preliminary topics for the lectures.

Computer labs The computer labs are compulsory. There is one lab per week during study weeks 3–6. Instructions and assignments are in the handout "Laboratory Excercises, C++ Programming".

The labs are mostly homework and need extensive preparation. Alternative times for the lab sessions: Tuesdays 10–12 or 15–17, Wednesdays 15–17, Thursdays 10–12 or 15–17, or Fridays 10 – 12.

The labs are done in groups of two students. Signing up for the labs:

- Visit `https://sam.cs.lth.se/Labs`
- Enroll at the same time as your lab parter. If you enroll on your own, the system will assign you a lab partner.
- Use your StiL id as user id.
- Contact the course coordinator if you have any problems, questions, or need to change your lab time.

Exercises There are no scheduled exercise sessions. Instead, there are exercises (one each week from the second week) with problems that you can solve at the computer. The exercise texts, programs to use and suggested solutions can be found in Canvas.

Project The project is compulsory and is to be carried out in groups of two to four students. The project description is in the handout "Project Description, C++ Programming".

The project report is due Wednesday, May 7. You may of course hand in the project earlier, but email the course coordinator if you do so. See the project description for instructions on how to hand in the project.

Examination

Parts The course is reported as two parts:

Written Examination	4 hp.
Laboratory Work and Assignment	3.5 hp

Both parts must be completed to pass the course.
The final grade is based on the result of the written examination.
Please note that you may bring *"one C++ book"* (a physical, printed book, no other papers or print-outs) to the written examination.

Written examination Friday 3/6, 08:00–13:00

Re-take exam Friday 22/8, 08:00–13:00