



# DD2387 Program System Construction Using C++ 6.0 credits

Programsystemkonstruktion med C++

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

## Establishment

Course syllabus for DD2387 valid from Autumn 2009

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

Second cycle

## Main field of study

Computer Science and Engineering, Information Technology, Information and Communication Technology

## Specific prerequisites

Single course students: 90 university credits including 45 university credits in Mathematics or Information Technology. English B, or equivalent.

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

The goals of the course are to give the students

- good knowledge of all parts of the C++ programming language
- knowledge of and proficiency in methods for developing, i.e. design, implementation, testing, and debugging, programs in C++
- good knowledge of the difficulties with and the weaknesses of C++ and methods to overcome them

so that they will be able to

- develop functioning program modules in C++ in an effective way.

## Course contents

Development of C++ from Simula to ISO standard.

All parts of C++ according to the ISO standard including classes, simple and multiple inheritance, generic functions and classes, exceptions, constant declarations, streams, name spaces, type equivalence and type compatibility, the pre-processor.

Program construction using C++: good programming style, object oriented development in C++, rules of thumb and hints for design and implementation of programs in C++, support for modularization and memory handling, making the code effective, common errors and traps, debugging, static and dynamic linking, portability.

The laboratory part consists of two laboratory assignments and a project assignment. The laboratory part will take about 100 hours.

## Course literature

To be announced at least 4 weeks before course start at course web page. Previous year: J. Lajoie & S. Lippman: C++ primer.

## Examination

- LAB1 - Laboratory Work, 4.5 credits, grading scale: P, F
- TEN1 - Examination, 1.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

In this course all the regulations of the code of honor at the School of Computer science and Communication apply, see: [http://www.kth.se/csc/student/heder-skodex/1.17237?l=en\\_UK](http://www.kth.se/csc/student/heder-skodex/1.17237?l=en_UK).

## Other requirements for final grade

Written examination (TEN1; 1,5 university credits).

Laboratory assignments (LAB1; 4,5 university credits).

## Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.