DD1388 Program System Construction Using C++ 7.5 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 DD1388 valid from Autumn 2017

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

On completion of the course, you should be able to

- program with dynamic memory allocation,
- apply the standard library,
- write correct C++ syntax,
- write test code,
- relate to advanced C++ literature,
- program generics with type parametrization,
- apply, in C++, your prior knowledge of object-oriented programming,
- model an extensive object-oriented project,
- present and justify an object-oriented model

in order to

- know that you master the whole language C++,
- with self-confidence be able to take part in C++ projects in the industry and develop or maintain the code.

Course contents

The development of C++ from C and Simula to ISO standard.

Overview of all parts of C++ according to the ISO standard, including classes, simple and multiple inheritance, overloading, generic functions and classes, exceptions, constant declarations, streams, name spaces, type equivalence and type compatibility, the preprocessor.

Program design with C++: good programming style, procedure at object-oriented development in C++, rules of thumb and tips for design and implementation of C++ programme, support for modularisation, memory handling, making the program code more efficient, common errors and traps, Unicode and localisation, use of the standard library, tools for testing, troubleshooting, static and dynamic linking and name mangling, portability.

Examination

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, the code of honour at the School of Computer Science and Communication is applied, see: http://www.kth.se/en/csc/utbildning/hederskodex

Under special circumstances, other examination formats may be used.

Other requirements for final grade

Passed laboratory assignments and examination.

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.