DD1316 Programming Techniques and C 6.0 credits

Programmeringsteknik och 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 DD1316 valid from Autumn 2013

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

General aims of the course: independent and in groups be able to solve problems by designing program on up to 500 rows in a modern programming language.

On completion of the course, you should be able to:

- follow the rules of the syntax of the programming language
- apply and account for rules for good programming style (such as user-friendliness, comments, error handling, structuring, flexibility),
- discover and correct programming errors
- modify given programs
- transfer data between file and program
- identify the need of and use control structures (conditional statements and loops),
- divide a larger problem into manageable parts and design functions for these
- use the data structures that are embedded in the programming language, and choose data structures that fit for the current problem,
- develop simple graphical user interfaces
- review others' programs

in order to have the possibility to:

- use programming to solve problem
- apply the problem solving methodology also within other fields than programming,
- discuss software development with experts
- assess commercial programs.

Course contents

Programming in a basic and important programming language such as C and a modern programming language such as Python. Data structures. Using simple graphics routines. Problem-solving through division into sub problems.

Program structuring. Several smaller programming assignments and a larger, individual programming assignment with strong emphasis on structuring and specification of included modules.

C-programming, types, compilation and make files.

Course literature

Reading list is presented no later than 4 weeks before the start of the course on the course web page.

Examination

- LAB1 - Laboratory Assignments, 1.0 credits, grading scale: P, F
- LAB2 - Laboratory Assignments, 1.0 credits, grading scale: P, F
- LAB3 - Laboratory Assignments, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB4 - Laboratory Assignments, 1.0 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, the code of honour at the School of Computer science and Communication is applied, see: http://www.kth.se/csc/student/hederskodex.

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.