DD1310 Programming Techniques 6.0 credits

Programmeringsteknik

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 DD1310 valid from Spring 2019

Grading scale

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

Education cycle

First cycle

Main field of study

Information Technology,Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

Overall objective: to solve problems independently and in groups by designing programs of up to five hundred lines in a modern programming language .

Objectives: After the course you should be able to

- follow the rules of the programming language syntax,
- apply and explain the rules of good programming style (such as user friendliness, comments, error handling, structuring, flexibility),
- detect and correct programming errors,
- modify a given program
- transfer data between files and programs,
- identify where control structures (conditionals and loops) are needed, and use these,
- split a large problem into manageable parts and construct functions for these,
- use built-in data structures and select data structures that are suitable for the current problem,
- use classes and construct new classes,
- review programs

to be able to

- use programming to solve problems,
- apply problem-solving methodology in other areas,
- discuss program development with experts,
- assess commercial programs

Course contents

Fundamental computer concepts.

Programming in a modern programming language (Python). Data structures and classes. Problem solving by splitting the problem into sub-problems. Program structuring. Several small programming exercises and one larger, individual programming exercise with emphasis on structuring and specification of the modules being used.

Course literature

Kurslitteratur meddelas senast 4 veckor före kursstart på kursens hemsida.

Examination

- LAB1 - Laboratory Task, 1.5 credits, grading scale: P, F
- LAB2 - Laboratory Task, 1.5 credits, grading scale: P, F

- LAB3 - Laboratory Task, 3.0 credits, grading scale: A, B, C, D, E, FX, 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/hederskodex/1.17237?l=en_UK.

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.