



# DD1310 Programming Techniques 6.0 credits

## Programmeringsteknik

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Course syllabus for DD1310 valid from Spring 19

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

**Grading scale:** A, B, C, D, E, FX, F

**Education cycle:** First cycle

**Main field of study:** Information Technology, Technology

### 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 main content

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.

### Language of instruction

Language of instruction is specified in the course offering information in the course and programme directory.

## Eligibility

## 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

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](http://www.kth.se/csc/student/hederskodex/1.17237?l=en_UK).