DD100N Programming Techniques, Web Course 6.0 credits

Programmeringsteknik, webbkurs

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

Establishment

On 03/03/2021, the Head of the EECS School has decided to establish this official course syllabus to apply from the autumn semester 2021, registration number J-2021-0607.

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

The upper secondary course Mathematics 4 or Mathematics D.

Language of instruction

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

Intended learning outcomes

Having passed the course, the student should be able to:

- design programs without code repetitions
- divide a larger problem in manageable parts
- divide a program
- apply control structures
- design and present user friendly output
- create flexible applications
- choose appropriate names of identifiers
- design interactive programs
- use and design composite data types (classes)
- transfer data between file and program,
- review others' programs

in order to be able to

- use programming to solve problems,
- apply the problem solving methodology also within other fields than programming,
- discuss software development with experts
- assess commercial programs
- independently be able to solve problems by designing programs of up to 500 lines in a modern programming language.

Course contents

Fundamental computer concepts.

Programming in a modern programming language (Python). Data structures. Use of simple graphical routines (for grade A). Problem-solving through division into sub-problems. Program structuring. Several smaller programming assignments as well as one larger, individual programming assignment with strong emphasis on structuring and specification of included modules.

Examination

- LAB3 - Laboratory Work, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB2 - Laboratory Work, 1.5 credits, grading scale: P, F
- LAB1 - Laboratory Work, 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.

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

LAB1 and LAB2 have to be passed in order for the student to present any part of LAB3.

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.