DD100N Programming Techniques, Web Course 6.0 credits

Programmeringsteknik, webbkurs

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

Establishment

Course syllabus for DD100N valid from Autumn 2019

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

For non-programme students:

- General entry requirements (completed upper-secondary education or the equivalent including Swedish and English) as well as
- mathematics D.

For all questions concerning entry requirements, admission, application and waiting list, contact KTH's central admission on admissions@kth.se

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.

Disposition

The course is taken at a distance using the web The sole exception is the final oral presentation, that will be at KTH Vallhallavägen, Stockholm (or via video call (e g Skype) with at least VGA resolution).

Course literature

All course material will be available via the course homepage.

Equipment

Computer with web browser and internet access. A Python interpreter can be downloaded at the beginning of the course.

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.

In agreement with KTH´s coordinator for disabilities, it is the examiner who decides to adapt an examination for students in possess of a valid medical certificate. The examiner may permit other examination forms at the re-examination of few students.

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.