



# DD1377 Low Level Programming and Computer Architecture 6.0 credits

Maskinnära programmering och datorarkitektur

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 DD1377 valid from Autumn 2022

## Decision to discontinue this course

The course will be discontinued at the end of Spring 2022 in accordance with the decision from the head of school: J-2022-0578. Decision date: 2022-03-22. The course was last given Spring 2020. The last opportunity for examination in the course is given Spring 2023. During the transition period, students follow EP1200 and are examined within the framework of EP1200.

## Grading scale

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

## Education cycle

First cycle

## Main field of study

## Specific prerequisites

## Language of instruction

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

## Intended learning outcomes

After completed course, you shall be able to

- describe how data and computer programs are stored on the computer
- describe how computer programs are executed on different levels
- describe how computers interpret and execute machine code
- describe how computers are constructed
- read, understand and write assembler programs

## Course contents

Different forms of data and how they are represented in the computer: numbers, text and computer programs.

Machine code and assembler programming.

The architecture of computers.

CISC and RISC.

Execution, Pipelining.

The memory hierarchy from register to hard disk.

## Examination

- LAB1 - Laboratory Assignments, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Examination, 1.5 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.

## Transitional regulations

LAB1 is examined through project assignments and partial exams in EP1200.

TEN1 is examined with TEN1 in EP1200.

## **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.