# DD225V Systems Programming and Operating Systems 7.5 credits

Systemprogrammering och operativsystem

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 DD225V valid from Spring 2007

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

## Specific prerequisites

## Language of instruction

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

# Intended learning outcomes

The goal of this course is to give knowledge about

- how compiler and linker puts together a program
- how computer and operating system executes and switches programs
- how you measure time on a computer
- how computer and operating system handles the memory
- how connection with external units and networks is done
- how concurrent programs workto be able to write programs that use the operating systems services

# Course contents

Compiler and linker.

Object code and executable code.

Processes, interrupt, switching of process, long jump in C.

Different types of timers.

Virtual memory.

I/O.

Networks.

Concurrent programming with threads, processes etc and related problems as race conditions and deadlocks.

# Disposition

- Lectures 24h
- Computer exercises 24h

# Course literature

R. E. Bryant och D. O'Hallaran: Computer Systems a Programmer's Perspective, Prentice Hall.

# Examination

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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.

# Other requirements for final grade

Laboratory assignments (LAB1; 2 cr.) (LAB2; 2 cr.), examination (TEN1; 1 cr.).

# 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.