



## Course syllabus

Faculty of Technology

Department of Computer Science and Media Technology

1DV512 Operativsystem, 7,5 högskolepoäng

Operating Systems, 7.5 credits

### **Main field of study**

Computer Science

### **Subject Group**

Informatics/Computer and Systems Sciences

### **Level of classification**

First Level

### **Progression**

G1F

### **Date of Ratification**

Approved 2014-10-03

Revised 2020-09-05 by Faculty of Technology. Prerequisites are revised.

The course syllabus is valid from autumn semester 2021

### **Prerequisites**

Introduction to programming 7.5 credits (1DV501) or Problem Solving and Programming 7.5 credits (1DV506), and Objectoriented Programming 7.5 credits (1DV502) or Programming and Data Structures 7.5 credits (1DV507) or the equivalent.

## Objectives

After the course the student should be able to:

- explain and give solutions to the problem of synchronization within operating systems
- understand and describe the problems connected to the use of a file system
- know about various alternatives of implementations of file system
- explain various techniques related to the implementation of main memory and have knowledge of their limitations
- estimate the efficiency of various solutions to implement the main parts of an operating system.

## Content

The course gives an overview of the structure of an operating system and various resources within such a system.

The following parts are treated:

- the structure of an operating system
- process handling
- process synchronization and deadlocks
- internal memory handling
- file systems

## Type of Instruction

Lectures and practical work. Attendance at some activities will be mandatory.

## Examination

The course is assessed with the grades A, B, C, D, E, Fx or F.

The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

Assessment of the student's performance is made through written tests or oral tests and the presentation of compulsory practical assignments. The types of assessment used in the course will be decided at the beginning of the course.

Students who have failed will be offered a new examination shortly after the regular tests.

## Course Evaluation

A course evaluation will be carried out and compiled after the course is completed. The compilation will be presented to the current board as well as to the students and filed.

## Credit Overlap

The course cannot be included in a degree along with the following courses of which the content fully, or partly, corresponds to the content of this course: 1DV012 Operating Systems, 7.5 credits

## Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

## Required Reading and Additional Study Material

### Required reading

Silberschatz A, Galvin P, Gagne G, *Operating Systems Concepts* (Latest Edition), International Student Version, John Wiley & Sons  
FTK, *Distributed material*. Pages 50.