



Faculty of Health, Science and Technology
Computer Science

Syllabus

Operating Systems

Course Code:	DVGB19
Course Title:	Operating Systems <i>Operativsystem</i>
Credits:	5
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has less than 60 credits in first-cycle course/s as entry requirements (G1F)

Major Field of Study:
DVA (Computer Science)

Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2024-02-14, and is valid from the Autumn semester 2024 at Karlstad University.

Prerequisites

Programming Techniques, 7.5 ECTS credits, or equivalent

Learning Outcomes

Upon completion of the course, students should be able to:

- explain the role of the operating system in modern computers,
- describe the internal structure of operating systems,
- explain how operating systems interact with hardware and application software, and
- describe and use common algorithms for memory, disk, process, and I/O management.

Content

The course describes the basic principles of how an operating system is structured and functions and how those principles have been implemented in modern operating systems.

After a general overview of computer and operating systems, the course treats processes, process scheduling, process synchronisation, deadlock, memory management, file system, I/O system, and mass storage devices.

Instruction is in the form of lectures, course literature, and additional course material. The course includes hand-in assignments and laboratory work.

Reading List

See separate document.

Examination

Assessment is based on a written exam, oral presentations, laboratory tasks, and hand-in assignments.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

Grades

One of the grades Distinction (VG), Pass (G), or Fail (U) is awarded in the examination of the course. For students in Engineering, one of the grades 5 (Pass with Distinction), 4 (Pass with Some Distinction), 3 (Pass), or U (Fail) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.