Faculty of Economic Sciences, Communication and IT
Computer Science

Syllabus

Course Approval
The syllabus was approved by the Faculty Board of Economic Sciences, Communication and IT on 7 March 2007, and is valid from the Autumn semester of 2007 at Karlstad University.

Course Code: DVGB01
Operating Systems, 7.5 ECTS Credits
(Operativsystem, 7.5 Swedish credit points)
Degree Level: Bachelor
Progression Level: B

Language of Instruction
The language of instruction is Swedish or English when required.

Prerequisites
Programming Technique (7.5 credits) and Computer Engineering (7.5 credits)

Major Field of Study
Computer Science

Learning Outcomes

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

-explain the role of operating systems in modern computers,
-describe the internal structure of operating systems,
-explain how operating systems interact with computer hardware and application software,
-describe and use common algorithms for memory management, disk management, process management, and I/O management, and
-give a written account of the results of laboratory exercises and take-home assignments.

Content and Form of Instruction

The course describes the basic principles of the structure and function of operating systems and how these principles are applied in practice in some modern operating systems.

The course begins with a general overview of computer and operating systems. There will also be a discussion of processes, process scheduling, process synchronisation, deadlock, memory management, file systems, I/O systems, and mass storage units. There will also be a discussion of distributed computing systems, as well as protection and security.

Instruction is is the form of lectures, independent study, and a number of additional resources. Students will also be expected to complete take-home assignments and laboratory exercises.

Reading List

See separate document.

Examination

Examination is in the form of a written exam, lab reports, and take-home assignments.

Grades

One of the grades 5 (Pass with Distinction), 4 (Pass with Merit), 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 assessment is based on student views and experiences as reported in written course evaluations and/or group discussions. Students will be informed of the result of the evaluation and of the measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional Information

Students who enrolled before 1 July 2007 will complete their studies in accordance with the requirements of the earlier admission. Upon completion students may request degree and course certificates to be issued under the current ordinance if they meet its requirements.

The local regulations for studies at the Bachelor's and Master's levels at Karlstad University, ref. C2007/368, stipulate the obligations and rights of students and staff.