Level: bachelor

Course title: Operating systems 2 (code: I261)

Status: elective

ECTS: 7

Requirements: completed course of Data structures and algorithms 2 (course id: I033)

Learning objectives

Introduction to advanced concepts of operating systems. Presentation of the UNIX operating system. Analysis of a subset of the realization of an operating system, with an emphasis on the user interface.

Learning outcomes

Minimum: Students should be able to use UNIX system calls and understand the basic principles of graphical user interface.

Desirable: Students should be able to use UNIX system calls in an advanced way and to understand and demonstrate the application of implementation of interactive graphics software system.

Syllabus

Theoretical instruction

Deadlocks. Disk Management. Security system. Protection mechanisms. UNIX operating system. The structure of the operating system and system calls. Input and output. The input-output devices. Interrupts and device management software. Operating system security. Graphical user interface. Elements of word processors and graphic editors. Analysis of a subset of the realization of an operating system.

Practical instruction

The system calls the UNIX operating system. The file system of UNIX operating system. Interprocess communication and synchronization with a special focus on the specifics of the UNIX operating system.

Weekly teaching load				
Lectures: 2	Exercises: 1	Practical Exercises: 2	Student research: 0	Other: 0