Course name: **Operating Systems**

No. of ECTS: **6**

Aim:

To acquaint students with basic concepts and issues related to operating systems from the theoretical, historical and practical aspects.

Course content:

- The concept of a computer system and operating system. The tasks and goals of operating systems. Development of operating systems in functional aspect.
- Operating system: batch systems, an input-output buffering, spooling, multiprogramming, virtual memory, disk system and file system, multitasking, multiple access
- Historical development of operating systems, the main lines of development
- Windows system administration: graphical tools and commands of text console. Users and access rights management on the level of the file system NTFS
- Basic parts of Unix system: the kernel, shell, file system utilities. Working in a graphical environment and text. The main command console. File system and access rights, special files of devices, mount file systems, network file systems.
- Processes in Unix system: tracking processes, analysis of system load, special programs for processes management: processes in the background, the screen program, the action of demons atd and crond.
- Cooperation of different systems locally and in the network: emulators, emulators of servers and client programs. Elements of system configuration and shell scripts.

Skills:

Defines the basic concepts related to operating systems, can explain the role of the operating system in the functioning of a computer system, selects appropriate system solutions for specific purposes,, can solve problems through the selection, implementation and use of the so-called free open source software, also in Linux.

Form of teaching:

Lecture, labs.