

DESCRIPTION OF STUDY MODULE*

Study programme

Applied Informatics and Programming

Study module

CLASSIC AND MODERN OPERATING SYSTEMS

Credits in total

5

Learning outcomes

- He(she) knows and able to explain the basic concepts associated with the OS.
- He(she) has ability to list classic, contemporary, modern, mobile and virtual OS and is able to explain the essential differences between them.
- He(she) is able to install and configure the operating system.
- He(she) is able to identify the OS fault and eliminate them.
- He(she) has ability to work in a team, and to interact and communicate with other IT professionals.

Aims of study module

The purpose of this course is to provide students with the knowledge of architecture of computer operating systems, organization fundamentals of file systems, to develop an integrated view of software and hardware connections including software compatibility and security issues.

Annotation of a study module

The aim of the Classic and modern OS course is to provide students with the basic knowledge of operating systems and files, to develop an integrated view of software and hardware connections including emerging software compatibility issues. The students develop cognitive abilities to understand new technologies theoretically, to perform data search, to use databases and other resources. During the practice the students consolidate practical skills in solving the problems with the selection of operating systems (Windows, UNIX, RTOS, etc.) and its maintenance, administration, systematic and applied processes and memory control objectives, the organization of input-output data and the security of information systems.

Topics of the subject

1. Review of Classic Operating Systems
2. Process interaction and addressing
3. Process status and distribution
4. Classic OS resource management
5. Modern Operating System elements
6. Mobile Operating Systems
7. Virtual Operating Systems
8. Modern Operating Systems

Procedure for assessment of knowledge and competences

Applicable criterion: ten-point scale, and the cumulative assessment scheme: practical work (portfolio folder method) consist 30%, the control works 10% and exam 50% of the final assessment, which is calculated by the weighted average method:

$$G = L*0,3 + K1*0,1 + K2*0,1 + E*0,5.$$

Subject final rating calculated only if all the tasks and works completely done and evaluate the positive point.

Main literature

1. Nijolė Sarafinienė. (2015) Operacinės sistemos: Mokomoji knyga. Technologija.
2. Nijolė Sarafinienė, Ingrida Lagzdinytė-Budnikė, Darius Matulis, Gytis Vilutis, Rokas Zakarevičius. (2012) Operacinių sistemų architektūros: mokomoji knyga. – Kaunas, Technologija. 162 p.
3. Andrew S. Tanenbaum, Herbert Bos. (2015) Modern Operating Systems: 4th Edition, Prentice Hall.

* Short form