

OPERATING SYSTEMS

(course title)

COURSE SYLLABUS ABSTRACT of higher education institution speciality

1-40 05 01 Information systems and technologies (according by field)

(speciality code and name)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	2	1	1
Semester	3	2	2
Lectures, hours	34	8	6
Laboratory classes, hours	16	4	4
Pass/fail, semester	3	2	2
Contact hours	50	12	10
Independent study, hours	72	96	98
Total course duration in hours / credit units	1083		

1.1 Course outline

The purpose of the discipline is to gain knowledge about the multitude of tasks that the operating system solves, the peculiarities of system software development, as well as the promising directions in the development of modern operating systems.

1.2 Course learning outcomes

Upon completion of the course, students will be expected to know:

- the structure, basic principles of construction and functioning of operating systems;
- principles of single- and multitask operation of operating systems, methods of organizing parallel development and synchronization of processes;
- The element base and the device of the main software and hardware modules of the computer;
- architecture and integrity support of operating system file systems, methods of interaction with elements of architecture; devices and software input-output means;
- methods of organizing and working with virtual and shared memory, memory management schemes;
- organization of network operating systems, basic problems of information security, methods and security mechanisms of operating systems;

be able to:

- use the tools of the operating system;
- use the system management commands;
- work as a user and use the electronic help service of the OS;
- install and configure OS, create simple local complexes based on network OS;
- to develop programs that expand the capabilities of OS;

possess:

- skills and technology in the environment of modern operating systems;
- installation and configuration of operating systems, organization, creation and maintenance of file systems used operating systems;
- command languages and methods of managing the tools of the applied operating systems.

1.3 Place of the discipline in the system of training in the system of training of specialists with higher education

The discipline belongs to the module "Systems and technologies for solving applied problems" (component of higher education institution).

The list of academic disciplines, studied earlier, the assimilation of which is necessary for the study of this discipline:

- Basics of Algorithmization and Programming (1, 2 semester).

The list of academic disciplines (cycles of disciplines), which will be based on this discipline:

- Computer networks.

Knowledge and skills acquired by students in the study of the discipline "Operating systems", are required in the development of the module "Instrumental tools for program development", as well as in the performance of course and diploma design.

1.4. Competencies

Mastering this academic discipline should provide the formation of the following competencies:

Codes of formed competences	Names of formed competencies
SC-13	Master the principles and basic skills, techniques, methods of adjustment, adaptation and maintenance of software tools

5. Requirements and forms of midcourse evaluation and summative assessment

In the study of the discipline used the module-rating system to assess the knowledge of students, as well as the following forms of classes: with the use of computers, multimedia.