OPERATING SYSTEMS (OS)
(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
Year	**1**
Semester	2
Lectures, hours	24
Laboratory classes, hours	24
In-class test (semester, hours)	
Pass/fail, semester	2
Exam, semester	-
Contact hours	48
Guided independent work	
Independent study, hours	72
Total course duration in hours / credit units	120/3

1. Course outline

The purpose of the discipline "Operating Systems" is to provide students with knowledge about the many tasks that the operating system solves, about the features of the development of system software, as well as about promising directions in the development of modern operating systems .

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

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

be able to:

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

possess:

skills and technology of work in the environment of modern operating systems; methods of installation and configuration of operating systems, organization, creation and maintenance of file systems used by the operating system; command languages and methods of operating system tool management.

3. Competencies

AC-1 : Be able to apply basic scientific and theoretical knowledge to solve theoretical and practical problems.
AK-2 : Own system and comparative analysis .
AK-3: Possess research skills .
AK-4: Be able to work independently .
AK-5: Be able to generate new ideas (be creative) .
AK-6: Own the basic methods, ways and means of obtaining, storing, processing information using computer technology .
AK-7: Have skills related to the use of technical devices, information management and computer work.
AK-8: Possess oral and written communication skills .
AK-10: Use the basic laws of natural sciences in professional activities.
AK-14: Organize your work on a scientific basis, independently evaluate the results of your activities.
SLK-6: Be able to work in a team.
PC-1: Own modern methods, languages, technologies and tools for designing and developing software products.
PC-2: To master the principles and basic skills, techniques, methods for setting up, adapting and maintaining software.
PC-5: Monitor the effectiveness of the use of computing tools and information systems in professional activities .
PC-6: Test software products and applied software for compliance with technical requirements
PC-21: Analyze and evaluate collected data

4. Requirements and forms of midcourse evaluation and summative assessment

When studying the discipline, a module-rating system for assessing students' knowledge is used. The following forms of conducting classes are used: traditional lectures and multimedia lectures, problem / problem-oriented laboratory classes using a computer. Based on the results of the

laboratory work, their protection is provided. There is a test at the end of each module. The final control of knowledge is carried out in the form of a test.