

Fundamentals of algorithmization and programming

(course title)

COURSE SYLLABUS ABSTRACT

1-53 01 02 - «Automated information processing systems»

(speciality code and name)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	1	1-2	1
Semester	1,2	1,2	1
Lectures, hours	68	10	4
Laboratory classes, hours	50	12	6
Practical classes (seminars), hours			
Course paper, semester	2	3	2
Exam, semester	1,2	1,2	
In-class test (semester, hours)		1,2 (4 h.)	1 (2 h.)
Contact hours	118	26	12
Independent study, hours	170	262	276
Total course duration in hours / credit units	288/8		

1 The purpose of the discipline is the formation of students' basic knowledge of programming, instilling in students the skills of setting, preparing and solving problems at a high level, preparation as a fundamental basis for studying additional disciplines.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- basics of algorithmization
- basic constructions of high-level languages;
- terminology;
- principles of software creation;
- software development technologies;
- basic data structures;
- basic concepts of object-oriented programming;

be able to:

- create algorithms;
- use the basic constructions of high-level languages;
- to implement algorithms in the form of programs in a high-level language;

possess:

- methods and tools for creating software;
- skills of independent development, debugging, testing and documentation of the program.

3. Competencies

Codes of generated competencies	Names of competencies being formed
YK-2	Solve standard tasks of professional activity based on the use of information and communication technologies
БІІК -6	Apply the main methods of algorithmization, methods and means of obtaining, storing, processing information in solving professional problems

4. Requirements and forms of midcourse evaluation and summative assessment

To assess the level of knowledge of students, the following diagnostic tools are used:

- oral and written questioning during laboratory classes;
- preparation of reports on laboratory work with their oral defense;
- carrying out control works (test tasks) on separate topics;
- Interview during individual and group consultations;
- defense of term paper;
- exam.