FUNDAMENTALS OF ALGORITHMIZATION AND PROGRAMMING
(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)
1-40 05 01 – Information systems and technologies (in design and production)
(specialisation code and name)

	STUDY MODE	
	full-time	
Year	**1**	Year
Semester	1-2	Semester
Lectures, hours	68	Lectures, hours
Laboratory classes, hours	50	Laboratory classes, hours
Exam, semester	1, 2	Exam, semester
Contact hours	118	Contact hours
Independent study, hours	110	Independent study, hours
Total course duration in hours / credit units	228/6	

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:

– the current state of one of the high-level algorithmic languages;

– basic dynamic data structures and algorithms of their processing;

– the most effective and frequently used in practice computational algorithms for solving engineering problems;

be able to:

- carry out the algorithmization of engineering problems;

know:

– modern programming tools;

– skills in analyzing input and output data of the problems to be solved and the forms of their representation;

– debugging skills of programs

3. Competencies

Codes of generated competencies   Names of competencies being formed

УК-2 Solve standard tasks of professional activity based on the use of information and communication technologies

БПК -10 Apply basic algorithmic methods, methods and tools of obtaining, storing, processing information when solving professional tasks.

4. Requirements and forms of midcourse evaluation and summative assessment

In the study of the discipline the module-rating system of students' knowledge assessment is used. The following forms of classes are used: traditional lectures and multimedia lectures, laboratory classes with the use of a computer. At the end of the laboratory work provided their defense.