Physics

(course name)

COURSE SYLLABUS ABSTRACT

6-05-0716-03 Information and measuring devices and systems

(code and name of specialties)

Information systems and technologies for non-destructive testing and diagnostics

(profile)

	STUDY MODE
	full-time
Year	1, 2
Semester	2, 3
Lectures, hours	68
Practical lessons (seminars), hours	50
Laboratory works, hours	68
Graded work, semester (hours)	
Graded exam, semester	2, 3
Contact hours	202
Independent study, hours	278
Total course duration in hours / credit units	504/14

1. Course outline

The aim of the training is to develop basic knowledge and skills in the aria of physics. They allow one to navigate in the flow of scientific and technical information and form a materialistic worldview and a scientific method of cognition.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know: the basic laws and theories of classical and modern physical science, as well the limits of their applicability; methods for measuring the physical characteristics of substances and fields; physical foundations of methods for studying substances; principles of experimental and theoretical study of physical phenomena and processes;

be able to: the laws of physics to solve applied engineering problems; use measuring instruments for the analysis of physical phenomena and processes;

to possess a skill: of physical modeling of technical processes and of analysis and solution of applied engineering problems.

3. Competencies

BPC-3. Own the basic concepts and laws of physics, the principles of experimental and theoretical study of physical phenomena and processes, apply the knowledge gained to solve problems of a theoretical and practical orientation.

4. Requirements and forms of midcourse evaluation and summative assessment

The overall assessment of the knowledge, skills and abilities of students is to analyze their work when they perform various types of classes. So, with a short survey of students before the start of the lecture, based on the results of the previous lecture, their knowledge in understanding the previously presented material is assessed. When students carry out measurements during laboratory work, it is assessed how deeply they have mastered the skills of working with measuring instruments, and when they perform calculation tasks when called to the board or independent work, their physical and mathematical culture is assessed. Intermediate attestation (exam) is carried out in two stages. The first stage includes a written answer to the questions, which are a random sample of the questions submitted for the exam and one task. The second stage consists in a brief conversation with the student on the fundamental issues of the course.