

**PHYSICS**  
**ANNOTATION**  
**TO THE TRAINING PROGRAM OF THE INSTITUTION OF HIGHER EDUCATION**

**Specialty** 1-36 07 02 Manufacture of products based on three-dimensional technologies

**Direction of specialty** \_\_\_\_\_

**Specialization** \_\_\_\_\_

	Form of higher education	
	Full-time (daytime)	Distance reduced
Course	1, 2	2
Semester	2, 3	3, 4
Lectures, hours	68	12
Practical classes, hours	32	-
Laboratory classes, hours	68	12
Classroom examination (semester, hours)		3 сем (2 часа), 4 сем (2 часа)
Exam, semester	2, 3	3,4
Classroom hours per academic discipline	168	28
Self-training, hours	72	212
Total hours per discipline / credit units	240/6	240/6

The purpose of the academic discipline is to provide the future engineer with the basis of his theoretical training in various fields of physical science, which allows him to navigate in scientific and technical information and form a materialistic worldview and the scientific method of cognition.

As a result of studying the academic discipline, the student must

**know:** the basic laws and theories of classical and modern physical science, as well as 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:** apply the laws of physics to solve applied engineering problems; use the main measuring instruments in the experimental study of physical and technological processes;

**own:** methods of physical modeling of technical processes; methods of analysis and solution of applied engineering problems.

**Competencies:** BPC-1: Be able to use the basic laws of the natural sciences in professional activities.

To assess the formation of competencies, current and intermediate attestations are used. The current attestation includes the following forms: solving problem in practical classes, written reports on laboratory work with their oral defense, tests for each module. At the same time, the understanding of the material covered, skills in working with measuring instruments, the ability to obtain and correctly evaluate experimental results are evaluated.

Intermediate attestation (exam) is carried out in two stages. The first stage includes a written answer to questions that are a random sample of 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.