

CONSTRUCTION MATERIALS

ANNOTATION

TO THE CURRICULUM OF A HIGHER EDUCATION INSTITUTION

Specialty:6-05-0716-03 – Information and measuring devices and systems

Profiling: Information systems and technologies of non-destructive testing and diagnostics

	Form of higher education
	full-time
Course	1
Semester	2
Lectures, hours	34
Laboratory classes, hours	16
Exam, semester	2
Classroom hours in the academic discipline	50
Independent work, hours	58
Total hours in academic discipline / credits	108/3

1. Summary of the discipline During the study of the discipline students will learn to choose materials and technology for their processing in the design of devices. They will gain knowledge about the structure and properties of metals, alloys and other structural materials, as well as how to obtain and process them to obtain products with desired properties and configurations.

2. Learning outcomes know: - methods of studying the structure and properties of materials;
- fundamentals of the theory and practice of thermal, chemical-thermal, thermomechanical treatment of metal materials;
- practical ways to study the structure, properties of materials and their heat treatment; - modern materials and effective methods of their heat-hardening treatment.

be able to:

- rationally use reference literature on the choice of materials, technologies for their processing, providing the necessary indicators of properties;
- correctly determine the scope of a particular material;
- assign methods and modes of structural-changing processing that ensure optimal properties of materials during the operation of specific parts under certain operating conditions. have the skill:
- research of the structure and properties of materials;
- selection of materials depending on the conditions of their operation;
- the use of various materials.

3. Formed competencies of

BOD 7 Choose materials and technology for their processing in the design of devices.

4. Requirements and forms of current and intermediate certification. The defense of laboratory work is carried out orally and in writing. The exam is conducted in writing in the form of answers to test questions.