PHYSICAL BASIS OF MEASUREMENTS
(name of the discipline)

ANNOTATION
TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Speciality *1-54 01 02 Methods and instruments for quality control and diagnostics object states*

Direction of specialty _____

Specialization *1-54 01 02 02 - Non-destructive testing of materials and products*	Form of higher education Full-time (daytime)
Well	2
Semester	3
Lectures, hours	34
Practical (seminar) lessons, watch	-
Laboratory classes, hours	34
Classroom examination (semester, hours)	-
Coursework, semester	3
Course project, semester	-
Report, semester	3
Exam, semester	-
Class hours for the academic discipline	68
Independent work, hours	40
Total hours per academic discipline / credits	108/3

1 Brief content of the discipline

The discipline deals with the physical basis for determining units of measurement, the physical effects used in measurements, the means and methods for recording measurement results.

2 Learning Outcomes

- know the physical laws that determine the methods of measurement and the principles of construction of measuring instruments, types and methods of measurement, the main functions of measuring systems, the natural limits of measurements, the main sources of measurement error: noise, interference, internal processes, general concepts in the field of measurement theory;

- be able to work with power supplies, generators, oscilloscopes and other devices, solve problems to determine the main characteristics of primary converters, apply physical knowledge to solve measurement problems, design measuring instruments, ensure the uniformity of measurements;

- own the basic measurement methods and the skills of applying these methods for the design of measuring instruments, the methodology for choosing the optimal procedures that make up the measuring process, the skills of analyzing the structure of the measuring path of instruments and measuring systems.

3 Formed competencies

BOD-10. Be able to solve measurement problems, including the choice of measurement methods and processing of measurement results

4 Requirements and forms of current and intermediate certification.

To assess knowledge, intermediate certification is used in the form of a test and current certification is used in the form of a test. This discipline provides for the implementation of the course work. To be admitted to the test, the student must complete and defend all laboratory work on time.