PROCESSING OF MEASUREMENT INFORMATION
(name of the discipline)

ANNOTATION
TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-54 01 02 Methods and instruments for quality control and diagnostics of the state of objects
Direction of specialty
Specialization 1-54 01 02 02 – Non-permissive testing of materials and products

	Form of higher education
	Full-time (daytime)
well	3
semester	5
Lectures, hours	50
Practical (seminar) classes, hours	34
Laboratory classes, hours	34
Exam, semester	5
Classroom hours per academic discipline	118
Independent work, hours	98
Total hours per academic discipline /credit units	216/6

1 1 Brief content of the discipline
2 The discipline deals with the fundamentals of analysis of measurement information signals (mathematical models of signals, signal classification, fundamentals of spectral analysis of signals, fundamentals of correlation analysis), the principles of construction and analysis of analog and digital measurement information processing systems, as well as the principles of visualization of measurement information in non-destructive testing.
3 2 Learning outcomes
4 - know the basic models of deterministic and random signals, types of conversion of measuring signals, information transmission devices in quality control systems, elements of the theory of signal detection against the background of interference and noise, principles of digital image formation;
5 - be able to use the principles of information exchange in data processing and transmission systems, determine the algorithm and functional diagram of digital filters, develop signal processing devices for quality control devices, use computer programs for constructing and analyzing digital images of objects in non-destructive testing;
6 - master the methods of informational description of signals and systems, optimal reception and processing of information, transformation of measurement information, skills in working with digital images
7 3 Formed competencies
8 BOD-11. Be able to use signal processing techniques for quality control instruments
9 4 Requirements and forms of current and intermediate certification.
10 To assess knowledge, intermediate certification is used in the form of a test and current certification is used in the form of an exam. To be admitted to the exam, the student must complete and defend all laboratory work on time.