

INSTRUMENTS AND METHODS OF VISUAL AND OPTICAL CONTROL

ANNOTATION TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Speciality1-54 01 02 - "Methods and instruments for quality control and diagnostics of the state of objects

	Form of higher education
	Full-time (daytime)
Well	3
Semester	6
Lectures, hours	50
Laboratory classes, hours	16
Exam, semester	6
Classroom hours per academic discipline	66
Independent work, hours	42
Total hours per academic discipline / credit units	108/3

1. Brief content of the discipline.

The discipline "Instruments and methods of visual and optical control" includes two main blocks: physical foundations and devices for visual and optical control; Technology for Visual and Optical Inspection of Test Objects. The objectives of the discipline are to systematize and consolidate the theoretical knowledge necessary for an engineer to create new effective methods of non-destructive testing; development of skills and abilities for the complex solution of technical problems in the development of methods and instruments for visual and optical control.

2. As a result of mastering the academic discipline, the student must

know: types of optical control, design of optical devices, main characteristics of optical devices, optical circuits, design of optical devices and principles of their operation, methods and techniques for carrying out measurements, characteristics of objects controlled by means of optical devices, regulatory documents for control;

be able to: choose the right measurement method, justify the choice of instruments for measurements, carry out measurements using measuring instruments, develop technological instructions and maps of visual-optical control, conduct visual and visual-optical control of specific objects, use regulatory documents on control;

possess: the skills of working with optical instruments, the rules for using regulatory documents, the methods of visual-optical control of specific objects.

3. Competences to be formed: SK-20 - To be able to carry out visual-optical and measuring control of industrial facilities

4. Requirements and forms of current and intermediate certification: exam (oral and written form). In order to be admitted to the exam, the student, in accordance with the program, must complete and defend laboratory work.