

# DEVICES AND METHODS RADIATION CONTROL

## ANNOTATION TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

**Speciality**1-54 01 02 - Methods and instruments for quality control and diagnostic subject states

	Form of higher education
	Full-time (daytime)
Well	4
Semester	8
Lectures, hours	42
Practical (seminar) lessons, watch	14
Laboratory classes, hours	14
Coursework, semester	8
Exam, semester	8
Classroom hours per academic discipline	70
Independent work, hours	38
Total hours per academic discipline / credit units	108/3

1. Brief content of the discipline. Devices and methods of radiation monitoring are widely used to detect defects in casting, welding, soldering and other technological processes. With their help determine the shape, nature and size of the defect.

2. Learning outcomes:

**know:**basic physical laws of X-ray and gamma radiation; characteristics and features of ionizing radiation detectors; device and principle of operation of means of radiation control; ways to improve the metrological characteristics of x-ray and gamma flaw detectors; technology of radiation monitoring of standard objects.

**be able to:**calculate means of protection against ionizing radiation; adjust X-ray and gamma flaw detectors; develop technology for radiation monitoring of materials and products and metrological support of technical means; control and interpretation of x-rays; draw up flow charts for control.

**own:**the ability to rationally choose methods and means of radiation monitoring, universal technical means of radiation monitoring, methods of processing information when monitoring and diagnosing industrial facilities.

3. Competences being formed: SK-19 "To be able to choose and apply radiation methods and equipment to control a particular object"

4. Requirements and forms of current and intermediate certification: exam (oral and written form). To be admitted to the exam, the student must successfully complete two tests, one for the module of the academic semester, as well as complete and defend all laboratory work.