

CONTROL OF PENETRATING SUBSTANCES

ANNOTATION TO THE EDUCATIONAL INSTITUTION'S CURRICULUM

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

Specialization Information technologies and non-destructive testing and diagnostic systems

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	3		3
Semester	6		6
Lectures, hours	16		4
Laboratory classes, hours	16		4
Pass/fail, semester	6		6
Contact hours	32		8
Guided independent study, hours, type/ semestr	40		64
Total course duration in hours / credit units	72/2		

1 Course outline

The purpose of the discipline is to familiarize students with the basic necessary provisions in the field of control of penetrating substances, physical phenomena in capillary flaw detection and leak detection, as well as with the instrument base, methodological and technological issues of the use of capillary flaw detection and methods for monitoring the tightness of industrial facilities.

2 Course learning outcomes

As a result of mastering the discipline, the student must:

know: the physical foundations, technologies, means of capillary control and leakproofness control; areas of application of various methods of capillary flaw detection and leak detection.

be able to: develop monitoring equipment; develop technology for monitoring materials and products with penetrating substances; metrological support for technical means; set up equipment and monitor materials and products using modern devices; draw up technological maps for monitoring.

have the skill of: rational choice of methods and means of capillary flaw detection and leak detection methods; possession of universal technical means of control of penetrating substances, as well as methods of information processing during control and diagnostics of industrial facilities.

3 Emerging competencies

Mastering this academic discipline should ensure the formation of the following competencies:
To be able to carry out the technological process of control of penetrating substances

4 Requirements and forms of midcourse evaluation and summative assessment

The general assessment of students' knowledge, skills and abilities consists in analyzing their work while performing various types of classes and elements of the current and intermediate attestation. Thus, during a brief survey of students before the start of the lecture, their knowledge in understanding the previously presented material is evaluated based on the results of the previous lecture. When students perform laboratory work, it is assessed how profoundly they have mastered the practical skills of implementing control of real objects. When studying the discipline, the following methods are used: current attestation in the form of control papers (written) and laboratory work with oral defense; intermediate attestation in the form of oral assessment.