NON-DESTRUCTIVE TESTING AT NUCLEAR POWER PLANTS
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	4		4
Semester	7		7
Lectures, hours	32		8
Pass/fail, semester	7		7
Contact hours	32		8
Guided independent study, hours, type/ semestr	76		100
Total course duration in hours / credit units	108/3		

1 Course outline

The purpose of teaching this discipline is to familiarize students with the issues of optimal organization of non-destructive testing of pressure vessels and pipelines during their operation at nuclear power plants in terms of ensuring their maximum safety according to strength criteria. To familiarize with the actual state of the nuclear power plant at Russian, foreign and Belarusian nuclear power plants

2 Course learning outcomes

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

knowledge of: characteristics and defects of NPP equipment elements, the relationship of non-destructive testing with the strength and life of equipment, rules and regulations of control in the nuclear power industry, a comprehensive operational control system, modern aspects of the organization of non-destructive testing at nuclear power plants; be able to: choose the optimal method and means of NC for specific facilities, assess their capabilities in terms of achieving maximum information content and reliability, assess the quality of controlled facilities and predict their technical condition and operability based on the results of control, organize a laboratory of NC metals at an energy enterprise; have the skill: an idea of the types and methods of forming requirements for parameters, equipment and preparation of regulatory documentation and maintenance personnel for NC and diagnostics in the nuclear power industry.

3 Competencies

The development of this academic discipline should ensure the formation of the following competencies: To apply physical methods, devices and control systems of energy equipment with the greatest technical and economic effect.

4 Requirements and forms of midcourse evaluation and summative assessment

When studying the discipline, the following methods are used: current attestation in the form of control papers (written form); intermediate attestation in the form of an oral assessment.