

RESEARCH SEMINAR
ABSTRACT
COURSE SYLLABUS ABSTRACT

Specialty 7-06-0716-03 Instrumentation

Profiling: Information systems and technologies of non-destructive testing and diagnostics

	STUDY MODE	
	full-time	part-time
Year	1,2	2,3
Semester	1,2,3	3,4,5
Lectures, hours	48	12
Practical classes (seminar), hours	54	12
Classroom hours for academic discipline	102	24
Pass/fail, semester	1,2,3	3,4,5
Independent study, hours	204	282
Total course duration in hours /credit units	306/9	

1. Brief summary of the academic discipline.
Objective: study of the methodological foundations of applied scientific research as applied to the problems of non-destructive testing and diagnostics.

2. Learning outcomes.

As a result of mastering the academic discipline, the student should:

- know the methodology for choosing the direction of scientific research, identifying characteristic features and contradictions to motivate scientific research, methods for analyzing the control object, defects, the methodology for selecting informative parameters of the control object, the methodology for preparing for and conducting experimental studies, methods for processing the results of scientific research and presenting them;
- be able to analyze the technical specifications for the object of study and literature, prepare a basis for conducting experimental studies, conduct research and evaluate the quality of the experiment, develop proposals for the use of the obtained results.
- have the skills to configure and operate non-destructive testing and diagnostic devices and equipment, an understanding of the types and methods of forming requirements for parameters, equipment and preparation of regulatory documentation, an understanding of such concepts as defect detectability, sensitivity, resolution of various NDT methods.

3. Formed competencies.

Mastering this academic discipline should ensure the formation of the competence to plan and conduct applied research work

4. Requirements and forms of current and midterm assessment

When studying the discipline, the following are used: current assessment in the form of tests (written form) with oral defense, midterm assessment in the form of a written and oral test.