

**RADIATION SOURCES AND RECEIVERS IN NONDESTRUCTIVE
TESTING**
(course title)

CORSE SYLLABUS ABSTRACT

Speciality 6-05-0716-03 –Information and measuring devices and systems

Information systems and technologies for non-destructive testing and diagnostics

	STUDY MODE	
	Full-time	Part-time (shortened program)
Year	3	3
Semester	6	6
Lectures, hours	34	6
Practical (seminar) classes, hours	16	4
Laboratory classes, hours	16	4
In-class test (semester, hours)		6 (2 ч)
Exam, semester	6	6
Contact hours	66	16
Independent work, hours	42	92
Total hours per academic discipline /credit units	108/3	

1 Course outline

The academic discipline examines the main photometric quantities, sources and receivers of optical radiation and their characteristics. structures; sources and receivers used in acoustic control, thermal control, radio wave control, radiation control, magnetic and eddy current control, as well as their main characteristics and parameters, designs

2 Course learning outcomes

Upon completion of the course, students will be expected to

- to know the principle of operation, the main characteristics and typical designs of radiation sources and receivers used in devices for non-destructive testing, environmental monitoring and technical diagnostics, standard methods for measuring the parameters of radiation sources and receivers;
- be able to calculate and measure the characteristics of physical radiation sources and receivers, and use radiation sources and receivers in practical non-destructive testing tasks;
- possess the skills of practical work with sources and receivers of radiation of various physical nature.

3 Formed competencies

Be able to make an informed choice of a measuring transducer and a device for measuring a given physical quantity.

4 Requirements and forms of current and intermediate certification.

To assess knowledge, intermediate certification is used in the form of a test and current certification is used in the form of an exam. To be admitted to the exam, the student must complete and defend all laboratory work on time.