

SCIENTIFIC AND TECHNICAL MEASUREMENT SUPPORT

COURSE SYLLABUS ABSTRACT

	STUDY MODE	
	Full-time	Part-time
Year	1	1, 2
Semester	1, 2	2, 3
Lectures, hours	34	8
Practical classes, hours	50	10
Pass/Fail, semester	1	2
Exam, semester	2	3
Contact hours	84	18
Independent study, hours	162	228
Total hours / credit units	246/7	

1. Brief description of the course.

Objective of the course is an in-depth study of the physical foundations of measurements, modern scientific principles, and technical means of measurements, including high-precision and specialized measurements.

2. Learning outcomes.

Upon completing the course, the student should

Know: the physical and scientific foundations of measurement, systems of units, principles of operation, limitations, and features of measuring instruments for various physical quantities. Modern approaches to measurements and trends in the development of measurement technology.

Be able to: analyze and determine optimal measurement methods for solving research, experimental, and applied tasks.

To possess a skill: selecting appropriate measurement tools for the task, scientific communication, reading scientific literature, and searching and systematizing information.

3. Formed competencies: «Apply methods of scientific cognition in research activities, generate and implement innovative ideas»; «Possess skills in designing experiments, processing, and presenting their results»; «Solve research and innovative tasks based on the application of information and communication technologies»; «Ensure communications, demonstrate leadership skills, be capable of team building and developing strategic goals and objectives»; «Be capable of forecasting the conditions for professional activities and solving professional tasks under uncertainty».
4. Requirements and assessment forms. Current assessment: oral questioning on the topic of the report; Intermediate assessment: pass/fail (oral form); exam (oral form).