

FUNDAMENTALS OF MEASURING TECHNOLOGY

COURSE SYLLABUS ABSTRACT

Specialty 6-05-0713-04 Automation of technological processes and productions

Concentration Automated electric drives

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	3	3	3
Semester	6	6	6
Lectures, hours	34	6	6
Laboratory classes, hours	34	6	6
In-class test (semester, hours)		6, 2	6, 2
Exam, semester	6	6	6
Contact hours	68	14	14
Independent study, hours	40	94	94
Total course duration in hours / credit units	108/3		

1. Course outline

Basic concepts of metrology. Measurement errors. Static accuracy of measuring instruments. Electrical measurements. Dynamic accuracy of measuring instruments. Standardized metrological characteristics of measuring instruments.

2. Course learning outcomes

Upon completion of the course, students will be expected to **to know:**

- the main problems of metrology;
- objects and modern measuring instruments
- classification, principles and methods of measurements;
- standards of basic physical quantities: time, length and mass;
- The State Instrument System (GSP);
- measurement errors;
- static accuracy of measuring instruments;
- electrical measurements.

be able to:

- use modern measuring instruments;
- determine static measurement errors and their components.

have the skill of:

- determining static errors;
- measuring electrical quantities.

3. Competencies

Know the basics of rationing the accuracy and quality of measuring the coordinates of an electric drive, modern devices for conducting electrical measurements, and be able to use appropriate measuring tools and devices.

4. Requirements and forms of midcourse evaluation and summative assessment

Current monitoring of academic performance involves assessment of the completion and defense of an individual assignment. The form of midterm assessment is an exam.