

# STANDARDIZATION OF ACCURACY AND TECHNICAL MEASUREMENTS

(course title)

## COURSE SYLLABUS ABSTRACT

Specialty 1-36 11 01 – Innovative Lifting-transporting, road construction machinery and equipment (by direction), 1-37 01 06 – Technical operation of cars (by directions)

(speciality code and name)

	STUDY MODE					
	full-time		part-time		part-time (shortened program)	
	1-36 11 01	1-37 01 06	1-36 11 01	1-37 01 06	1-37 01 06	1-36 11 01
Year	2	2	3	2	2, 3	2
Semester	4	4	5	3	4, 5	3
Lectures, hours	34	34	6	6	8	6
Laboratory classes, hours	16	16	6	6	4	6
In-class test (semester, hours)	-	-	5 sem. (2 hour's)	5 sem, (2 hour's)	4 term (2 hour's)	3 sem. (2 hour's)
Exam, semester	4	4	5	3	4	3
Contact hours	50	50	14	14	14	14
Independent study, hours	70	126	106	162	94	106
Total course duration in hours / cred	120/3	176/4	120/3	176/4	108/3	120/3

### 1. Course outline

The discipline "Standardization of accuracy and technical measurements" contains general ideas about the methods of ensuring the interchangeability of a product at the stages of its life cycle, the basics of choosing requirements for the standardization of accuracy of parameters, their control and the essence of standardization of these requirements.

### 2. Course learning outcomes

Upon completion of the course, students will be expected to

#### know:

- methods of ensuring interchangeability at the stages of the product life cycle;
- methods of normalizing the accuracy of parameters;
- basic principles of building tolerance and fit systems, basic standards - basic standards of interchangeability, covering tolerance and fit systems for typical types of connections of machine parts and devices;
- theoretical foundations of measurement control of parameters;

#### be able to:

- use the standards of the basic norms of interchangeability;
- to indicate the requirements for the accuracy of the parameters in the drawings, read and decipher the symbols;
- to carry out measuring control of parameters by calibrations and basic universal measuring instruments;
- to present measurement results indicating errors and uncertainties.

#### possess:

- methodology for ensuring interchangeability of technical system nodes;
- methods of using precision rationing in the manufacture of parts and assemblies.
- methods of control of geometrical parameters of details.

### 3. Competencies

Mastering this discipline should ensure the formation of the following competence:

AC-1.Be able to apply basic scientific-theoretical knowledge to solve theoretical and practical problems. AC-2.Master systemic and comparative analysis. AC-3 Master the skills of research. AC-4. Be able to work independently. AC-5. Be able to generate new ideas (have creativity). AC-6 Have an interdisciplinary approach to problem solving. AC-7 Have skills related to the use of technical devices, information management and computer work. AC-8 Have oral and written communication skills. AC-9.Be able to learn and improve their skills throughout their lives. SLC-2 be capable of social interaction. SLC-3 Have the ability to communicate with interpersonal and international people. SLC-4 Have health and wellness skills. SLC-5.Be able to be critical and self-critical. SLC-6.Be able to work in teams. CLC-7 Have strong moral and psychological qualities. SLC-8.Independently acquire and use new knowledge and skills in practice, including new areas of knowledge not directly related to the field of work.

### 4. Requirements and forms of midcourse evaluation and summative assessment

Current and intermediate attestation are conducted in written and oral-written form through tests, reports on laboratory work with their oral defense, written exams.