

STANDARDIZATION OF ACCURACY AND TECHNICAL MEASUREMENTS

(course title)

COURSE SYLLABUS ABSTRACT

Specialty 1-36 11 01 – Innovative equipment for the construction complex (by directions),

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 | | 1-37 01 06 |
| Year | 2 | 2 | 3 | 2, 3 |
| Semester | 4 | 4 | 6 | 4, 5 |
| Lectures, hours | 34 | 34 | 8 | 8 |
| Laboratory classes, hours | 16 | 16 | 4 | 4 |
| In-class test (semester, hours) | - | - | 6 term (2 hour's) | 4 term (2 hour's) |
| Course paper, semester | - | 5 | 6 | 5 |
| Exam, semester | 4 | 4 | 6 | 4 |
| Independent study, hours | 50 | 50 | 14 | 14 |
| Contact hours | 58 | 58 | 94 | 94 |
| Total course duration in hours / credit units | 108/3 | 108/3 | 108/3 | 108/3 |

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:

1-36 11 01. SK-1. Apply the basic principles of interchangeability of machine parts and their connections, standardization and accuracy, standardization of tolerances and fits for various machine parts and production conditions.

1-37 01 06. CC-1. Master the basics of research activities, search, analyze and synthesize information.
BOD-8. To select the standards of accuracy of geometric parameters in the design of products based on the operational requirements imposed on them and methods and measuring instruments for monitoring deviations of geometric parameters of products

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.