STANDARDIZATION OF ACCURACY AND TECHNICAL MEASUREMENTS

(name of discipline)

ANNOTATION
TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-37 01 02 - Automotive engineering

	STUDY MODE
	full-time
Year	3
Semester	5
Lectures, hours	34
Laboratory classes, hours	16
Exam, semester	5
Contact hours	50
Independent study, hours	70
Total course duration in hours / credit units	120/3

1 Course outline

The discipline "Standardization of accuracy and technical measurements" contains general concepts of methods of ensuring the interchangeability of the product at the stages of its life cycle, the basis for the selection of requirements for the accuracy of parameters, their control and the essence of standardization of these requirements.

2. Course learning outcomes

As a result of mastering the discipline, a student must

know:

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

be able to:

- use the standards of basic standards of interchangeability;
- mark accuracy requirements on drawings, read and decipher symbols;
- carry out measuring control of parameters with calibrators and basic universal measuring instruments;
- present the results of measurements with the indication of errors and uncertainties;

possess:

- methodology for ensuring the interchangeability of technical system components;
- methods of using accuracy rationing in the manufacture of parts and assemblies.
- methods of control of geometric parameters of parts.

3 Competencies

Mastering this training 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 capable of generating new ideas (have creativity). AC-6 Have an interdisciplinary approach to problem solving. AK-7 Have skills related to the use of technical devices, information management and computer work. AC-9 Have the ability to learn and develop lifelong learning skills.SK-3 Have interpersonal and international communication skills. SLC-4 Have health saving skills. SLC-5.Be able to be critical and self-critical. SLC-7.Have strong moral and psychological qualities. PC-13.Perform design work and use and utilize computer aided design (CAD) systems, including computer graphics, in design and engineering organizations, in the design departments of enterprises and companies designing and manufacturing automobiles and motor vehicles. PC-24.Organize and supervise the assembly of motor vehicles, their components and mechanisms as part of a group of specialists.PC-27.Determine the technical level indicators of the designed cars and other vehicles. PC-29.Study and analyze the documentation coming from other enterprises and organizations in order to use it to solve problems in the field of automotive engineering.

4 Requirements and forms of current and intermediate attestation

Current and interim evaluations are conducted in writing through tests, quizzes, and written exams.