

# APPLIED MECHANICS

## ANNOTATION TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

### Specialty 1-53 01 05 – "Automated electric drives"

	STUDY MODE	
	full-time	part-time (shortened program)
Year	2	2
Semester	4	3
Lectures, hours	34	8
Practical classes (seminars), hours	16	2
Laboratory classes, hours	16	4
In-class test (semester, hours)		3, (2 hours)
Course project, semester	5	4
Exam, semester	4	3
Contact hours	66	16
Independent study, hours	42	92
Total course duration in hours / credit units	108 / 3	108/3

### 1. Course outline

The purpose of the discipline is the formation of specialists who are able to reasonably and effectively apply existing and master new knowledge and skills of analysis (calculation) and design of parts, components of electric drives for general machine-building purposes, providing a theoretical and practical basis for design training.2. Результаты обучения

### 2. Course learning outcomes

To know:

- designs, type, materials and methods of manufacturing general-purpose machine parts
- the interaction of parts and the physical processes accompanying their work, taking into account the resistance to the effects of operational factors, the types and nature of the destruction of parts and the definition of criteria for their performance and calculation:

- engineering methods for calculating machine parts and assemblies that ensure their required reliability;
- methods of computer-aided design and construction using machine graphics;

be able to:

- perform engineering calculations of parts and components of electric drives that ensure their required reliability and durability;
- design parts and components of electric drives;
- to carry out the design development of parts, components of electric drives using design standards, standard designs, standards and other regulatory materials;

own:

- methods of substantiation of designs of components and parts of electric drive machines.

### 3. Competencies

SK-3 Know the basic details and mechanisms of machines and devices, be able to calculate and develop their designs.

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

- oral; oral-written.
- passing the exam;
- protection of individual tasks performed within the framework of independent work;
- protection of laboratory work;
- protection of the course project.