

**«ROBOTIC INDUSTRIAL COMPLEXES»**  
**ANNOTATION**  
**TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION**  
**Specialty: 1-53 01 05 «Automated electric drives»**

	Form of higher education		
	Full-time	Full-time	Full-time
Course	<b>4</b>	4	<b>4</b>
Semester	7	8	8
Lectures, hours	32	8	8
Laboratory classes, hours	64	14	14
Exam, semester	7	8	88
Contact hours (Classroom hours per academic discipline)	96	22	22
Independent study, hours	40	114	114
Total course duration in hours / credit units	136/3		

1. Brief content of the discipline

The purpose of the discipline is to study the principles of construction, algorithms for the functioning of automatic control devices used to automate robotic and flexible production complexes.

2. Learning outcomes

As a result of mastering the academic discipline, the student must

know:

- principles of building automated process control systems (APCS);
- designs of robots and machine tools with program control;
- methods of calculation and design of process control systems;
- typical technical solutions and examples of circuit diagrams of electric drives.

be able to:

- select, design, set up and operate industrial robots and machine tools with program control.

possess

- skills in solving problems of research, calculation and construction of typical control systems for robotic complexes;
- knowledge to be able to monitor compliance with labor protection, safety, environmental safety when working with robotic systems;
- knowledge to carry out the commissioning and maintenance of robotic systems, to perform the necessary diagnostic, adjustment and repair work.

3. Formed competencies

Mastering this academic discipline should ensure the formation of the following competencies:

Codes generated competencies	Names of formed competencies
SC-12	To be proficient in the methods of analysis and synthesis of digital control systems to be able to design them

4. Requirements and forms of current and intermediate certification: defense of laboratory work, exam.