

DESIGN OF ELECTROMECHANICAL DEVICES

COURSE SYLLABUS ABSTRACT

Specialty 6-05-0713-04 Automation of technological processes and productions
Profiling Automated electric drives

	STUDY MODE
	full-time
Year	2
Semester	3
Lectures, hours	34
Practical classes (seminars), hours	34
Pass/fail, semester	3
Contact hours	68
Independent study, hours	40
Total course duration in hours / credit units	108/3

1. Course outline

The purpose of the academic discipline is to obtain students the necessary theoretical knowledge of the calculation of electrical machines of various types.

2. Course learning outcomes

Upon completion of the course, students will be expected to know:

- type and principles of operation of electrical machines produced by domestic and global mechanical engineering;

- the ability of electrical machines to operate, in addition to nominal, in emergency modes;
- methods for regulating the rotation speed of electrical machines;
- methods of energy saving when operating electrical machines.

be able to:

- select and use in practice electric machines according to specified technical requirements;
- determine parameters and take performance characteristics of electric machines on a test bench after repair.

to possess a skill:

- calculation of design parameters, electromagnetic and thermal conditions, operating characteristics of electric machines;
- software calculation of electric machines on a computer.

3. Competencies

Know the design, nomenclature, operating principles of electronic and electrical devices for use in automated electric drive systems. Be able to select electronic and electrical devices for automated electric drive systems.

4. Requirements and forms of midcourse evaluation and summative assessment

Current certification involves assessing the performance and defense of practical work. To assess the quality of students' assimilation of educational material, intermediate certification is carried out in the form of a test.