AUTOMATED ELECTRIC DRIVE OF PRODUCTION EQUIPMENT

COURSE SYLLABUS ABSTRACT

6-05-0714-02 «Mechanical engineering technology, metal cutting machines and tools»
(speciality code and name)

Technological equipment for mechanical engineering production
(concentration)

	STUDY MODE
	full-time
Year	3
Semester	6
Lectures, hours	34
Practical classes (seminars), hours	16
Laboratory classes, hours	16
Pass/fail, semester	6
Contact hours	66
Independent study, hours	42
Total course duration in hours / credit units	108/3

1. Course outline

The purpose of teaching the discipline "Automated electric drive of production equipment" is for students to obtain skills in designing automated electric drives for technological equipment systems, including metal-cutting machines, as well as calculations of the main elements of electric drives.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- basic requirements for electric drives of technological equipment systems;
-possibilities of automated electric drives when used in technological equipment systems;
- operating modes of electric motors and methods for their selection; - capabilities of components used in control systems of automated electric drives;

be able to:

- formulate the conditions of problems associated with the design of automated electric drives for technological equipment systems;
- perform calculations related to the design of automated electric drives for technological equipment systems;

possess a skill:

- application of design methods for automated electric drives for process equipment systems.

3. Competencies

To be able to design automated electromechanical drives for metal-cutting machines using modern components and performing calculations. Be able to design analog systems and select digital control system devices that correspond to the functional capabilities of the technological equipment.

4. Requirements and forms of midcourse evaluation and summative assessment

Current monitoring of academic performance includes assessment of the performance and defense of laboratory work. To assess the quality of assimilation of educational material by students, an intermediate assessment is conducted in the form of a test.