AUTOMATED ELECTRIC DRIVE OF TYPICAL INDUSTRIAL MECHANISMS
(course title)

COURSE SYLLABUS ABSTRACT

6-05-0713-04 Automation of technological processes and production
(speciality code and name)

Automated electric drives
(concentration)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	**4**	**4, 5**	**3, 4**
Semester	7, 8	8, 9	6, 7
Lectures, hours	46	10	10
Practical classes (seminars), hours	30	6	6
Laboratory classes, hours	30	6	6
Course project, semester	8	9	7
Pass/fail, semester	7	8	6
Exam, semester	8	9	7
Contact hours	106	22	22
Independent study, hours	92	176	176
Total course duration in hours / credit units	198 / 6		

1. Course outline

The aim of the academic discipline is to develop students' skills in identifying a set of requirements that determine the choice of an electric drive system for typical industrial mechanisms, the design features of electric drives that meet the specified requirements, and examples of their technical implementations in various areas of industry.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

classification of typical industrial mechanisms (TIM); requirements for their electric drive; methods of calculation and design of AED TIM; typical technical solutions and examples of basic electrical circuits of electric drives

be able to:

select, design, adjust and operate various automated electric drive systems for TIM

to possess a skill:

of calculating static loads and selecting motors for typical industrial mechanisms; designing electric drive systems and control circuits for typical industrial mechanisms

3. Competencies

To master methods for calculating the characteristics of a traction electric drive, methods for calculating power and selecting electric motors for the electric drive of typical industrial mechanisms, to be able to select elements of traction and general industrial electric drives and develop control circuits

4. Requirements and forms of midcourse evaluation and summative assessment

When studying the discipline, a modular-rating system of assessing students' knowledge is used. Current monitoring of academic performance involves assessing the performance of practical and laboratory work, and a course project. The form of interim assessment is credit and exam.