AUTOMATED ELECTRIC DRIVE OF TYPICAL INDUSTRIAL MECHANISMS

COURSE SYLLABUS ABSTRACT

1-53 01 05 Automated electric drives

	STUDY MODE		
	full-time	full-time	part-time (shortened program)
Year	4	4, 5	3, 4
Semester	7, 8	8, 9	6, 7
Lectures, hours	46	16	10
Practical classes (seminars), hours	22	8	6
Laboratory classes, hours	46	16	10
In-class test (semester, hours)		8, 9, 4 ч	6, 2 ч
Course project, semester	8	9	7
Exam, semester	7, 8	8, 9	6, 7
Contact hours	114	44	28
Independent study, hours	78	148	164
Total course duration in hours / credit units	192 / 5		

1. Course outline

The discipline studies automated electric drive systems of typical industrial mechanisms, the latest achievements in the field of industrial electrical equipment, automated electric drive systems.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- the classification of standard industrial mechanisms, requirements for their electric drive;
- the methods for calculating and designing an automated electric drive for typical industrial mechanisms;
- the typical technical solutions and examples of circuit diagrams of electric drives;

be able to:

- to select, design, adjust and operate a variety of automated electric drive systems for typical industrial mechanisms;

possess:

- the methods for calculating static loads and choosing engines for typical industrial mechanisms;
- the methodology for designing electric drive systems and control circuits for typical industrial mechanisms.

3. Формируемые компетенции

SC-9. Possess the methods for calculating the characteristics of a traction electric drive, methods for calculating power and choosing electric motors for electric drives of typical industrial mechanisms, be able to select elements of traction and general industrial electric drives and develop control schemes

4. Requirements and forms of midcourse evaluation and summative assessment

To assess the quality of assimilation of educational material by students, including acquired competencies, current certification is carried out in the form of an exam in the academic discipline.
Intermediate control of progress is aimed at ensuring maximum efficiency of the educational process, increasing motivation for learning; provides for the assessment of the performance and protection of laboratory and practical work.