ELECTRIC MACHINES

COURSE SYLLABUS ABSTRACT

Specialty 6-05-0713-04 Automation of technological processes and productions

Profiling Automated electric drives

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	**2**	**2**	**2**
Semester	3	3	3
Lectures, hours	34	8	8
Laboratory classes, hours	34	8	8
Course project, semester	3	3	4
Exam, semester	3	3	3
Contact hours	68	16	16
Independent study, hours	76		
Total course duration in hours / credit units	144/4		

1. Course outline
The purpose of teaching the discipline is for students to obtain the necessary theoretical knowledge of energy conversion processes, design, principles of operation and properties of electrical machines of various types used in the production and transmission of electricity, as well as for their effective use, and the acquisition of practical skills when working with them.

2. Course learning outcomes
   Upon completion of the course, students will be expected to
      know:
      – type and principles of operation of transformers and electrical machines;
      – methods for regulating the rotation speed of electrical machines;
      – methods of energy saving when operating electric machines;
      be able to:
      – select and use in practice electric machines and transformers 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 of electric machines;
      – software calculations of electric machines on a computer.

3. Competencies
 Know the methods for selecting electrical machines for standard operating modes, be able to calculate performance characteristics, know how to find faults and be able to eliminate them during the operation of electrical machines.

4. Requirements and forms of midcourse evaluation and summative assessment
Current monitoring of academic performance includes assessment of the completion and defense of laboratory work and a course project. The form of intermediate certification is an exam.