

ELECTROMECHANICAL SYSTEMS OF ELECTRIC CARS

COURSE SYLLABUS ABSTRACT

7-06-0716-03 Instrument engineering
(speciality code and name)

Monitoring and control in electromechanical systems
(concentration)

Advanced higher education

	STUDY MODE	
	full-time	part-time
Year	1	2
Semester	2	3
Lectures, hours	24	6
Practical classes (seminars), hours	16	4
Exam, semester	2	3
Contact hours	40	10
Independent study, hours	68	98
Total course duration in hours / credit units	108/3	

1. Course outline

The purpose of teaching the discipline “Electromechanical systems of electric cars” is to study the principles of construction and calculation of electromechanical systems of electric cars.

2. Course learning outcomes

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

- the principles of construction of electromechanical systems of electric cars and the main electric drive systems used in them;
 - methods for solving problems related to calculations in electromechanical systems of electric cars when choosing power electrical equipment;
 - the principles for calculating the traction and speed characteristics of electric cars;
- be able to:
- formulate conditions for justification and selection of electric drive systems in electromechanical systems of electric cars;
 - perform calculations related to the choice of power electrical equipment for electric cars;
- to possess a skill:
- solving problems related to calculations in electromechanical systems of electric cars.

3. Competencies

Be familiar with methods for calculating the characteristics of a traction electric drive, methods for calculating power and selecting electric motors for electric drive of standard industrial mechanisms, be able to select elements of a traction and general industrial electric drive and develop control circuits

4. Requirements and forms of midcourse evaluation and summative assessment

Current monitoring of progress is aimed at ensuring maximum efficiency of the educational process, and provides for the assessment of the implementation and defense of practical work.

To assess the quality of students' assimilation of educational material, interim certification is carried out in the form of an exam.