

TECHNICAL OPERATION OF VEHICLES

(course title)

COURSE SYLLABUS ABSTRACT of higher education institution speciality

1-37 01 06 «Technical operation of vehicles (by directions)»

(speciality code and name)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	3,4	3,4	3,4
Semester	5,6,7	6,7,8	6,7
Lectures, hours	84	12	6
Practical classes (seminars), hours	16	4	6
Laboratory classes, hours	68	10	
In-class test (semester, hours)		2	1
Course paper, semester	7	8	7
Exam, semester	5,6	6,7	6
Contact hours	168	30	14
Independent study, hours		324	342
Total course duration in hours / credit units		358 / 9	

1. Course outline

The discipline contains consideration of methods for managing the technical condition of the rolling stock of road transport, the development and implementation of measures to ensure the operability, safety, efficiency and environmental friendliness of vehicles at the level of individual departments and motor transport organizations as a whole.

2. Course learning outcomes

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

the theoretical foundations of the technical operation of vehicles, the strategy and methods for ensuring the performance of vehicles; the main prospects and directions for the development of road transport, the production and technical base and modern technologies in the automotive industry; system of maintenance and repair of rolling stock of road transport; main failures, malfunctions and their symptoms, diagnostic parameters and methods for their determination for all systems, components and assemblies of vehicles; methods of storage of rolling stock, spare parts, units, maintenance and repair materials; goals, objectives and structure of the technical service of the motor transport enterprise;

be able to:

determine and adjust the modes and standards of technical operation; correctly take into account the influence of various factors on the technical condition of cars; analyze the causes of vehicle failures, choose repair methods and carry them out;

possess:

methods of organization and technology of car diagnostics; the main methods for determining the causes of failures and malfunctions of units, mechanisms and systems of vehicles; maintenance and repair technology for vehicles.

3. Competencies

AC - 1 Be able to apply basic scientific and theoretical knowledge to solve theoretical and practical problems of the technical operation of vehicles. AC - 2 Be proficient in systemic and comparative analysis. AC - 3 Possess research skills. AC - 4 Be able to work independently. AC - 5 Be able to generate new ideas (be creative). AC - 6 Own an interdisciplinary approach to solving problems. AC - 7 Have skills related to the use of technical devices, information management and computer work. AC - 8 Possess oral and written communication skills. AC - 9 Be able to learn, improve their skills throughout their lives. SPC - 5 Be capable of criticism and self-criticism. SPC - 6 Be able to work in a team. PC - 21 Reasonably choose the method of logistics for the organization of road transport. PC - 22 To select the optimal modes of operation of road transport, taking into account operating conditions to improve the technical and economic indicators of their work. PC - 23 Develop technological documentation, take part in the creation of standards and regulations. PC - 24 Make engineering decisions to improve the structure of the production and technical base of road transport organizations and optimize logistics. PC - 25 Ensure inspection of the technological equipment of the motor transport organization in a timely manner, carry out operational activities. PC - 26 To carry out operational control of the functioning of the production and technical base of the organization, downtime and runs of vehicles, their modes of operation. PC - 27 Carry out modern methods and means of diagnosing and monitoring the condition of cars. PC - 28 Ensure compliance with the technology for the maintenance and repair of vehicles, check the condition of vehicles and their elements after repair, maintain the necessary technological documentation. PC - 29 To adapt the production and technical base of the organization to the characteristics of the rolling stock and the conditions of its operation, to the systems for collecting, processing and transmitting information about the reliability of vehicles and the transport work performed. PC - 30 Monitor compliance with labor protection, safety, fire safety at each workplace and throughout the organization as a whole. PC - 31 Identify the causes of downtime of vehicles, work posts and production units, individual performers, keep records of them, develop proposals for their prevention.

4. Requirements and forms of midcourse evaluation and summative assessment.

oral-written: reports on classroom practical exercises with their oral defense; reports on laboratory work with their oral defense; term papers with their oral defense; exam in oral or written form.