

**TECHNOLOGY OF PRODUCTION AND REPAIR 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, 5	3, 4
Semester	5, 6	7, 8, 9	5, 6
Lectures, hours	86 (5-52 h., 6-34 h.)	14 (7 – 8 h., 8 – 6 h.)	5 – 8 h.
Practical classes (seminars), hours	5 – 16 h.	7 – 4 h	5 – 4 h.
Laboratory classes, hours	32 (5-16 h., 6-16 h.)	8 (7 – 4 h., 8- 4 h.)	5 – 6 h.
In-class test (semester, hours)	-	7 – 2 h. 8 – 2 h.	5 – 2 h.
Course paper, semester	6	9	6
Exam, semester	5, 6	7, 8	5
Contact hours	134	30	20
Independent study, hours	124	228	238
Total course duration in hours / credit units	258/7		

1. Course outline

The academic discipline is aimed at teaching future road transport specialists knowledge, skills and practical skills in organizing the production and repair of cars.

2. Course learning outcomes

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

manufacturing technology of blanks for automotive parts; progressive processes of mechanical processing of parts, including on CNC machines and in flexible production systems; fundamentals of assembly processes in the production of automobiles; basic provisions for car repair; technology of repair of cars and units in the conditions of specialized car repair enterprises; the purpose and essence of technological processes for the restoration of parts and components of cars; methods of restoring car parts, repair technology for their typical representatives; acquisition and assembly of typical connections, units and vehicles; prospects for the development of the automotive industry and car repair.

be able to:

choose a rational way to restore parts; to develop technological processes for the restoration of parts and assembly of vehicle units at a high quality level; ensure high quality of acquisition and assembly of the main components and assemblies.

possess:

methodological foundations of the organization and technology of production and repair of cars and their main parts; methods for designing and planning technological processes for manufacturing and restoring parts.

3. Competencies

PC-1 - Organize the work of small teams of performers in the maintenance and repair of vehicles. PC-3 - Interact with specialists of related profiles (accounting, planning department, logistics department). PC-9 - Draw up a schedule for the frequency of preventive maintenance and repair, determine the amount of repair work and the need for materials and spare parts. PC-10 - Master the basics of industrial relations and management principles, taking into account technical, financial and human factors. PC-11 - Develop technological processes for diagnosing, maintaining and repairing vehicles and their elements for specific conditions. PC-13. – Develop technical specifications for the design of technological equipment for the diagnosis, maintenance, repair of vehicles or their elements, taking into account the results of research and development 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 the inspection of the technological equipment of the motor transport organization in a timely manner, carry out operational activities. 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-30 - Monitor compliance with labor protection, safety, fire safety standards at each workplace and throughout the organization as a whole. PC-32 - Identify and analyze the causes of failures and malfunctions of units, assemblies, details of means of maintenance, diagnostics and repair of motor vehicles. PC-33 - Ensure the serviceable, operable condition of technological equipment. PC-35 - Ensure timely repair of process equipment, check its condition after repair, maintain the necessary technological documentation for repairs. PC-36 - Prepare process equipment for certification. PC-37 - Carry out work on the introduction of equipment and new technology in accordance with the rules and regulations, using technological projects of road transport organizations and their individual facilities and relevant technical documentation. PC-38. Ensure the proper use of diagnostic and instrumentation to control the correctness and quality of maintenance and repair operations. PC-39 - Perform adjustment and installation work of stands, lifts, devices in accordance with the rules and regulations. PC-40 - Select appropriate equipment, apparatus, devices and tools for the implementation of technological processes of technical impacts. PC-41 - Organize and ensure the conduct of preventive maintenance and testing of technological equipment. PC-42 - Participate in the organization of work to improve the skills of secondary technical personnel and the professional skills of workers in a motor transport organization. PC-43 - Generalize and use the best industry and cross-sectoral experience PC-44 - Organize and conduct training for workers and secondary technical personnel on the prevention of industrial injuries and occupational diseases. PC-45 - Search and analyze information on projects and solutions in the field of maintenance and repair of vehicles. PC-46 - Determine the goals of innovation and how to achieve them. PC-47 - Work with scientific, technical and patent literature. PC-50 - Conduct experimental and technological research in the creation and implementation of new equipment and technologies for the maintenance and repair of motor vehicles, their pilot testing and testing.

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

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.