

Motor Vehicle Servicing and Repairs

(course title)

COURSE SYLLABUS ABSTRACT

6-05-0715-07 "Operation of ground transport and technological machines and complexes"
(by areas)

(specialty code and name)

Technical Maintenance of Automobiles,
Vehicle service
(concentration)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	3	4	3
Semester	6	8	6
Lectures, hours	34	8	8
Practical classes (seminars), hours	16	4	4
Laboratory classes, hours	34	8	8
Course paper, semester	6	8	6
Exam, semester	6	8	6
Contact hours	84	20	20
Independent study, hours	96	160	160
Total course duration in hours / credit units	180/5		

1. Course outline

Technologies for diagnosing, maintaining, and repairing vehicles in the context of auto service centers and motor transport organizations, in compliance with current technical regulatory requirements and recommendations from vehicle and component manufacturers.

2. Course learning outcomes

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

- technical regulations governing the work of car service organizations and the procedure for carrying out work on state technical inspection of vehicles at diagnostic stations;
- the procedure for receiving and issuing cars in force in car service organizations;
- main types of documentation, document flow diagram in organizing a car service;
- technology for performing cleaning and washing, anti-corrosion, diagnostic, body and painting, polishing and other works of technical maintenance and repair of cars;
- classification, structure and principle of operation, as well as features of operation of diagnostic and technological equipment, tools and devices necessary for performing work in the organization of car service;
- marking, scope and procedure for the use of materials for performing work in the organization of car service;
- guarantees and responsibility of the car service organization when servicing cars;
- quality control system for car servicing;
- safety and labor protection requirements when performing various jobs in the car service organization.

be able to:

- draw up process charts for diagnostics, maintenance and repair of cars with recommendations for choosing the most effective process equipment, tools and necessary materials;
 - work with technical regulations and process documentation of car manufacturers, equipment and materials;
 - work with electronic catalogs of technical information of car manufacturers (TIS, such as ELSA) and independent developers (such as Autodata), databases of manufacturers and suppliers of spare parts (such as ETKA);
 - correctly interpret information presented in the form of oscillograms and histograms of signals in various electrical circuits of cars obtained using a motor tester and/or a diagnostic car scanner;
 - carry out work on express diagnostics of the chassis and control systems of cars using diagnostic lines and stands (such as Sherpa Safeline).
- to possess a skill:
- work with the main types of diagnostic and technological equipment, tools and devices necessary to perform work in the organization of car service;
 - work with documentation in both paper and electronic form;
 - creation and management of the system of electronic document circulation in the organization of car service;
 - diagnostics of complex technical systems such as internal combustion engine, gearbox, etc.

3. Competencies

Apply the methodological principles of pneumatics and hydraulics when diagnosing vehicles and selecting process equipment.

Carry out calculations and analysis of technological processes for restoring vehicle resources and designing areas for restoring parts.

4. Requirements and forms of midcourse evaluation and summative assessment: reports on classroom practical exercises with their oral defense; laboratory reports with their oral defense; coursework with their oral defense; examination in oral or written form.