

# EXPLOITATION MATERIALS

(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	4	4	4
Semester	7	8	7
Lectures, hours	38	4	4
Practical classes (seminars), hours	14	4	4
In-class test (semester, hours)	-	8/2	7/2
Exam, semester	7	8	7
Contact hours	52	10	10
Independent study, hours	48	90	90
Total course duration in hours / credit units	100/3,0	100/3,0	100/3,0

### 1. Course outline

Formation of students' knowledge and skills that allow them to master a complex set of operational requirements for the quality of modern operating materials (fuels, lubricants, special fluids, non-metallic materials, adhesives), taking into account their impact on the reliability and durability of internal combustion engines.

### 2. Course learning outcomes

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

- basic principles for the selection of fuels and lubricants for vehicles;
- methods of storage and disposal of EM;
- safety precautions for the use and storage of operating materials.

be able to:

- to determine experimentally the main quality indicators of EM;
- normalize the consumption of EM;
- select fuels, lubricants and technical fluids for specific vehicles.

possess:

- methods of storage of fuel and lubricants;
- techniques for predicting economic and environmental consequences.

### 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 - 2 Organize work to improve the skills of employees of a motor transport organization. PC - 4 Analyze and evaluate the collected data. PC - 5 Negotiate, develop contracts with other interested parties. PC - 6 Prepare reports, materials for presentations and represent them in order to advertise car maintenance and repair services. 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 Own 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 - 15 Calculate and analyze the modes of operation of rolling stock and structural units of road transport organizations and outline ways to improve them. PC - 17 To put into practice various measures to ensure the environmental safety of vehicles and organizations. 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 - 31 Identify the causes of downtime of vehicles, work posts and production units, individual performers, keep records of them, develop proposals for their prevention. PC - 32 Identify and analyze the causes of failures and malfunctions of units, assemblies, parts of maintenance equipment, diagnostics and repair of vehicles. PC - 41 Organize and ensure the maintenance and testing of technological equipment. PC - 43 Summarize and use best industry and cross-sectoral experience

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

The following forms are used to diagnose competencies:

- oral and written

To assess the level of knowledge of students, the following diagnostic tools are used:

- reports on classroom laboratory work with their oral defense;
- offset.