

ANNOTATION

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

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

	Form of higher education		
	Full-time (daytime)	Part-time	Part-time abbr.
Course	2	3	2
Semester	4	5	4
Lectures, hours	34	8	8
Laboratory classes, hours	16	4	4
Pass, semester	4	5	4
Class hours for the academic discipline	50	12	12
Independent work, hours	58	96	96
Total hours per academic discipline/credit units	108 / 3	108/3	108/3

- Brief content of the discipline:* hydraulics (physical properties of liquids and gases), hydrostatics, hydrodynamics, hydraulic calculation of pipelines, hydraulic machines, hydraulic devices, auxiliary drive devices), pneumatics and pneumatic actuators.
- As a result of mastering the academic discipline, the student must:*

know:

- physical properties of liquids and gases;
- Fundamentals of hydrostatics and hydrodynamics of liquids and gases;
- methods for determining energy losses in elements of hydraulic and pneumatic systems;
- basic concepts of hydraulic shock;
- issues of fluid outflow from a small hole and nozzles;
- basics of calculation of pipelines of hydraulic and pneumatic systems;
- design and characteristics of hydraulic and pneumatic drives;
- basics of calculation of hydraulic and pneumatic drives and their automation devices;

be able to:

- by calculation to determine the main parameters of the elements of the hydraulic and pneumatic circuits;
 - experimentally determine the parameters and characteristics of elements of hydraulic and pneumatic systems;
- solve problems of functional analysis of hydraulic and pneumatic systems and determine their main parameters and characteristics.

own:

- skills of calculations of hydraulic and pneumatic systems;
 - knowledge that allows solving problems in the field of operation of hydraulic and pneumatic systems.
- Mastering this academic discipline should ensure the formation of the following competencies:*

SK-1	Carry out thermodynamic calculation of work processes, analysis of thermal devices of automobile engines and climatic installations of automobiles and conduct thermal measurements.
SK-2	Apply the methodological foundations of pneumatics and hydraulics when diagnosing vehicles and selecting technological equipment.

4. *Requirements and forms of current and intermediate certification:* he current attestation includes a test, the intermediate one includes a test, defense of laboratory work.