

VEHICLE ENGINES

(course title)

COURSE SYLLABUS ABSTRACT of higher education institution speciality

1-37 01 07 " Vehicle service"

(speciality code and name)

	STUDY MODE	
	full-time	part-time
Year	3	3
Semester	6	5
Lectures, hours	34	8
Practical classes (seminars), hours	16	4
Laboratory classes, hours	34	8
Exam, semester	6	5
Contact hours	84	20
Independent study, hours	132	196
Total course duration in hours / credit units	216/6	216/6

1. Course outline

Workflows occurring in the cylinders of automobile engines, kinematics and dynamics of the crank mechanism, design principles and methods for calculating the main mechanisms and systems of the engine.

2. Course learning outcomes

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

- the essence of theoretical and real cycles in internal combustion engines; - principle of operation, design features, performance indicators of modern automobile engines and prospects for their development; - modes and operating conditions of automobile engines and their elements; - indicators of environmental safety and efficiency of automobile engines; - principles of design and calculation of vehicle engines;

be able to:

- evaluate the degree of perfection of automobile engines; - choose the optimal vehicle with the appropriate engine for the given operating conditions; - to ensure the efficient operation of automobile engines and the implementation of their resource and maintainability;

possess:

- calculation of the indicator parameters of the internal combustion engine; - organizing tests of the engine and fuel equipment, - taking the main characteristics; - calculation of the main parts and systems of automobile internal combustion engines.

3. Competencies

Mastering this academic discipline should ensure the formation of the following competencies:

SK-3 - be able to study and analyze the necessary information, technical data and performance of automobile engines. carry out the necessary calculations using modern technical means

4. Requirements and forms of midcourse evaluation and summative assessment

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

- oral-written.

Oral and written forms include:

Reports on laboratory work with their oral defense; term papers with their oral defense; exam in oral or written form.