

# THEORY OF FUNCTIONING OF THE MECHANISMS OF VEHICLE SYSTEMS

## **COURSE SYLLABUS ABSTRACT**

**Speciality 1-37 80 01 «Vehicles»**

**Profiling Wheeled Vehicle Design**

	STUDY MODE	
	full-time	part-time
Year	1	1
Semester	1	1
Lectures, hours	36	8
Practical classes (seminars), hours	36	8
Exam, semester	1	1
Contact hours	72	16
Independent study, hours	128	184
Total course duration in hours / credit units	200/6	

### 1. Course outline

Study of the system approach and its capabilities in solving the problems of the mechanisms of vehicle systems.

### 2. Course learning outcomes

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

theory of the functioning of vehicle mechanisms; statistical processing of experimental data; research, analysis and synthesis of vehicle mechanisms based on the theory of queuing and simulation modeling; methods for assessing the conformity of vehicles; methods for determining the parameters of conformity of vehicles; methods of decision-making and decision-making.

be able to:

analyze the behavior of vehicle systems; draw up algorithms for the functioning of vehicle systems; develop a procedure for testing and conformity assessment of vehicles; synthesize and optimize vehicle test models; draw up scientific and technical reports on the results of the tests.

possess:

methods of processing and analyzing the results of experiments and tests; methods of regression and correlation analysis; methods of modeling the processes of vehicle systems.

### 3. Competencies

SK-1. Possess knowledge of the theory of functioning of vehicle mechanisms and systems and be able to apply them in the design of wheeled vehicles.

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

oral-written form: reports on practical works with their oral defense, exam.