

VEHICLE DESIGN METHODOLOGY

COURSE SYLLABUS ABSTRACT

**Speciality 1-37 80 01 «Vehicles»
Profiling Wheeled Vehicle Design**

	STUDY MODE	
	full-time	part-time
Year	1	2
Semester	2	3
Lectures, hours	40	10
Laboratory classes, hours	16	4
Practical classes (seminars), hours	16	4
Exam, semester	2	3
Contact hours	72	18
Independent study, hours	108	162
Course project, semester	50/2	50/2
Total course duration in hours / credit units	180/6	

1. Course outline

Study of the system approach and its capabilities in solving the problems of road transport, methods of modeling modern technological processes arising during testing and conformity assessment of vehicles, improvement of methods for analyzing test results and criteria for assessing the conformity of vehicles.

2. Course learning outcomes

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

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

be able to:

to draw up algorithms for modeling vehicle systems; develop a procedure for assessing the conformity of vehicles; simulate and optimize vehicle configurations; prepare scientific and technical reports on the results of modeling; conduct a system analysis aimed at solving the problems of making the optimal decision based on the choice of many possible alternatives;

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-5 Own methods of testing and conformity assessment of wheeled vehicles and their components/

4. Requirements and forms of midcourse evaluation and summative assessment

oral-written form: reports on practical works with their oral defense, reports on laboratory work with their oral defense, course project with its oral defense, exam.