

THEORY OF MECHANISMS AND MACHINES

(course title)

COURSE SYLLABUS ABSTRACT

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

Specialty direction 1-37 01 06-01 "Technical operation of cars (public and personal vehicles)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	2	3	2
Semester	3	5	3
Lectures, hours	34	8	8
Practical classes (seminars), hours	34	8	8
Laboratory classes, hours	16	4	4
Classroom control work	-	5, (2 hours)	3, (2 hours)
Exam, semester	3	5	3
Independent study, hours	84	22	22
Contact hours	60	122	122
Total course duration in hours / credit units	144/4	144/4	144/4

1. Course outline

The purpose of the discipline is to form specialists who are able to reasonably and efficiently apply existing and master new methods of research and design of mechanisms and machines applied to any practical tasks during their operation.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- basic theoretical positions of the structure, kinematics, dynamics and control of machine systems, individual machines and mechanisms;
- measuring equipment for determining kinematic and dynamic parameters of mechanisms and machines;
- principles of designing the main types of mechanisms;

be able to:

- make calculation schemes (models) of machines and mechanisms suitable for solving technical problems, performing kinematic and dynamic calculations, apply the results of calculations to obtain optimal characteristics of mechanisms and machines;
- develop algorithms for calculating parameters on a PC, perform specific calculations;

possess:

- basic principles of design, analysis and synthesis of various mechanisms;
- methods of designing the main types of mechanisms;
- methods of calculating the dynamic loading of machines and mechanisms.

3. Competencies

The development of this academic discipline should ensure the formation of the following competencies:

BOD-7 – Perform calculations and analysis of kinematics and dynamics of mechanisms, machines and structures.

4. Requirements and forms of midcourse evaluation and summative assessment

- written;
- oral-written.