THEORETICAL MECHANICS

(course title)

COURSE SYLLABUS ABSTRACT

1 - 37 01 06 «Technical operation of cars»

(speciality code and name)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	2	2	1
Semester	3	4	2
Lectures, hours	50	12	6
Practical classes (seminars), hours	34	8	6
In-class test (semester, hours)	-	4 (2)	2 (2)
Exam, semester	3	4	2
Contact hours	84	20	14
Independent study, hours	36	100	106
Total course duration in hours / credit units	120 / 5		

1. Course outline

The purpose of the discipline is to study the basic concepts, laws and methods of theoretical and analytical mechanics and their application to study the dynamics of machines and methods of their calculation, as well as to build mathematical models of machines used in computer-aided design and forecasting.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- basic concepts of mechanics;
- laws of mechanics.

be able to:

- apply methods of formalization of working processes of machines;
- to make calculated mathematical models of machines using computer technology for their solution and analysis.

possess:

- methods used in mechanics to describe mechanical systems;
- laws and methods of mechanics for the analysis of complex mechanical systems;
- laws and methods of mechanics for constructing mathematical models of mechanical systems.

3. Competencies

BPC -10: Perform calculations and analysis of kinematics and dynamics of mechanisms, machines and structures

4. Requirements and forms of midcourse evaluation and summative assessment

The following forms are used to diagnose competencies:

- written;
- oral-written.

To assess the level of knowledge of students, the following diagnostic tools are used: control papers; reports on classroom practical exercises with their oral defense; exam; assessment based on a modular rating system.