THEORETICAL MECHANICS

(course title)

COURSE SYLLABUS ABSTRACT

6-05-0715-07 Automobiles, tractors, mobile and technological complexes

(speciality code and name)

Computer engineering in the automotive industry

(concentration)

	STUDY MODE
	full-time
Year	2
Semester	4
Lectures, hours	34
Practical classes (seminars), hours	34
Course paper, semester	4
Exam, semester	4
Contact hours	68
Independent study, hours	76
Total course duration in hours / credit units	144 /4

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:

- descriptions of mechanical systems;
- analysis of complex mechanical systems;
- construction of mathematical models of mechanical systems.

3. Competencies

To apply in practice physical and mathematical methods for calculating mechanisms, machines and structures, to analyze and develop kinematic and dynamic schemes

4. Requirements and forms of midcourse evaluation and summative assessment

To assess the level of knowledge of students, the following diagnostic tools are used: tests; assessment based on a modular rating system. Intermediate certification is an exam.