THEORY OF MECHANISMS AND MACHINES
(course title)

COURSE SYLLABUS ABSTRACT

1 36 11 01 "Innovative equipment for the construction complex" (by directions)
(speciality code and name)
Specialty direction 1-36 11 01-01 "Innovative equipment for the construction complex"

Specialization 1-36 11 01 -01 01"Innovative equipment for the construction and operation of highways"

	STUDY MODE
	full-time
Year	**2**
Semester	3
Lectures, hours	34
Practical classes (seminars), hours	16
Exam, semester	3
Contact hours (including hours for managed independent work)	50 (6)
Independent study, hours	58
Total course duration in hours / credit units	108/3

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 the kinematic and dynamic parameters of mechanisms and machines;
- principles of designing the main types of mechanisms;

be able to:

- to make calculation schemes (models)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:

- the basic principles of design, analysis and synthesis of various mechanisms of PTM and SDM;
- 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-5 – To perform and analyze kinematic schemes of mechanisms and machines, to possess the basic theoretical provisions of kinematics and dynamics to understand the principles of mechanisms and machines and their analytical research.

4. Requirements and forms of midcourse evaluation and summative assessment

- written;
- oral-written.