

MECHANICS OF MATERIALS AND STRUCTURES

COURSE SYLLABUS ABSTRACT

6-05-0716-03 «Information and measuring instruments and systems»

(speciality code and name)

Information systems and technologies of nondestructive testing and diagnostics

(concentration)

	STUDY MODE
	full-time
Year	2
Semester	3
Lectures, hours	34
Practical classes (seminars), hours	34
Exam, semester	3
Contact hours	68
Independent study, hours	76
Total course duration in hours / credit units	144 / 4

1. Course outline

The academic discipline includes the study of the basic design and calculation skills of the simplest mechanisms and their elements, which are components of a mechanical drive, which will allow for design development.

2. Course learning outcomes

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

- basic concepts, laws and models of mechanics, methods and methods of strength and kinematic calculations;
- the main types of mechanisms used in mechanical drives and the general requirements for them;
- types of analysis (calculation) used in the design of mechanisms;
- types of materials used for the manufacture of components of mechanisms and their main properties.

be able to:

- to carry out engineering calculations of structural elements and units of mechanisms that provide the required strength and reliability;
- to design elements of structures and units of mechanisms.

to possess a skill:

- kinematic, force and strength analysis of mechanisms;
- measurements of the main parameters of the elements of mechanisms used in mechanical drives.

3. Competencies

Be able to develop designs of assembly units, assemblies and de-tools of non-destructive testing devices.

4. Requirements and forms of midcourse evaluation and summative assessment

- oral and written: protection of settlement and graphic assignments;
- written: exam.