

MECHANICS OF MATERIALS

(The name of the discipline)

ANNOTATION

To the curriculum of discipline

Specialty: 1-36 01 04 – **Equipment and technology of highly effective processes processing materials**

Qualification engineer

	Form of higher education
	Full-time (day)
Well	2
Semester	3,4
Lectures, watches	68
Practical classes, watches	50
Laboratory classes, watches	32
Exam, semester	3,4
Auditor hours in academic discipline (including hours for managed independent work)	150 (10)
Independent work, clock	110
Total hours in academic discipline /test units	260/6

1 Purpose of academic discipline

The purpose of the academic discipline is to form students' skills in calculations of typical structural elements, mechanical programs, the working bodies of machines and mechanisms for strength, stiffness, stability and durability.

2 Planned results of studying the discipline

As a result of studying the discipline, the student should know:

- the main hypotheses of the mechanics of materials about the properties of structural materials and the nature of the deformation;
- general requirements for structural materials;
- methods for calculating typical structural elements for strength, stiffness and stability;
- methods of experimental study of voltages and deformations;

be able to:

- apply in practice the methods and approaches to solving engineering problems of calculating structures, parts and units of machines for strength, stiffness and stability;
- examine stresses and deformations with experimental methods;
- to set up tasks taking into account the complex operational conditions of the functioning of the studied object;

own:

- methods of theoretical and experimental analysis of structures for strength, rigidity and stability, taking into account the properties of structural materials;
- methods of calculating structures for their optimal use.

3 Requirements for the development of academic discipline

The development of this discipline should ensure the formation of the following competencies: BPK-9.

4 Educational technologies

Forms of conducting classes when studying various topics of the course: traditional, multimedia.