

STRENGTH OF MATERIALS

(course title)

COURSE SYLLABUS ABSTRACT

Specialty 1-70 02 01 – Industrial and civil construction

(speciality code and name)

	STUDY MODE	
	full-time	part-time
Year	2	3
Semester	3	5
Lectures, hours	34	8
Practical classes (seminars), hours	34	8
Laboratory classes, hours	34	8
Exam, semester	3	5
Contact hours	102	24
Independent study, hours	78	156
Total course duration in hours / credit units	180 / 5	

1. The purpose of the discipline - is to teach students to make calculations of typical elements of building structures for strength, rigidity and stability with guaranteed durability.

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

- the main hypotheses of the resistance of materials about the properties of structural materials and the nature of deformation;
- methods for calculating typical structural elements for strength, rigidity and stability;
- methods of experimental study of stresses and deformations;

be able to:

- to make the right choice of the main criteria for the calculation of structural elements and structures;
- to make rational calculation schemes that provide a sufficient degree of accuracy in combination with the simplicity of engineering calculation;
- perform engineering verification and design calculations of structural elements in accordance with the selected criteria and analyze the solutions obtained;

possess:

- skills in calculating structural elements experiencing simple and complex types of resistance from static and temperature influences;
- skills to analyze the stress-strain state of structures;
- skills in determining the conditions for the occurrence of limit states at design points of the structure according to classical strength theories.

3. Competencies to be developed

Upon completion of this course the following competencies must be developed:

UC-1(universal competence) - master the basics of research activities, search, analyze and synthesize information.

4. Summative and mid-course assessment requirements and methods

When studying the discipline, a modular rating system for assessing students' knowledge is used. Forms of classes: traditional.