"WOOD AND PLASTIC STRUCTURES "
ANNOTATION
TO THE CURRICULUM OF THE INSTITUTION OF EDUCATION
Specialty **6-05-0732-02 "Real Estate Appraisal and Management "**

	Form of higher education
	Full-time (daytime)
Course	4
Semester	7
Lectures, hours	34
Practical (seminar) classes, hours	34
Examination, semester	7
Classroom hours per academic discipline	68
Independent work, hours	92
Total hours per academic discipline / credit units	160/3

1. Brief content of the discipline: 1. Introduction 2. Wood and wood materials as structural materials. 3. Plastics as structural materials. 4. Protection of wood in structures from biological damage, fire and corrosion. Methods of protective treatment of structures. 5. Calculation of structural elements made of solid and laminated wood and plastics. 6. Connections of structural elements made of wood and plastics. 7. Features of the calculation of wooden elements of a composite section on yielding connections. 8. Basic structural diagrams and fundamentals of designing buildings using wood and plastics. 9. Floorings, lathing, purlins. 10. Panels. 11. Rafter systems in coverings. 12. Beams in coverings and ceilings. 13. Roof trusses. 14. Columns, racks. 15. Arched structures. 16. Frame structures. 17. Ensuring spatial immutability of planar systems. 18. Domes, vaults, shells, structural structures. 19. Frame and panel systems. 20. Pneumatic building structures, hanging and awning coverings. 21. Main stages and quality control of structures.

2. As a result of mastering the academic discipline, the student must

know:

history of development and application of structures made of wood and plastics;

progressive products and structures made of wood and plastics;

physical and mechanical properties of wood;

basics of calculation of structural elements made of solid wood, their connections, as well as composite cross-section elements with ductile connections;

methods for designing structures made of wood and plastics operating under load according to limit states;

be able to:

use normative, mandatory and recommended documentation and literature:

calculate the structures of buildings and structures according to the first and second groups of limit states;

carry out an economic assessment and justification of the building structures used in buildings and structures;

design individual elements and joints of structures made of wood and plastics,

have the skill:

knowledge of modern methods for calculating the structures of buildings and structures made of wood;

possession of a PC when designing building structures of buildings and structures.

3. Formed competencies

Know the basics of research, search, analyze and synthesize information.

Show initiative and adapt to changes in professional activities.

Apply technical, regulatory, and legal acts on the design of metal, reinforced concrete, stone, wood, and plastic structures to solve engineering and construction problems.

4. Current certification of students is carried out to determine the compliance of the results of their educational activities with the requirements of educational standards, curriculum, and documentation of educational programs of higher education. The forms of current certification of students is an exam. Current certification is carried out in oral or oral-written form. The form of midterm assessment is test questions on practical classes and questions on the lecture course.