

MODERN METHODS OF MONITORING AND DIAGNOSTICS IN CONSTRUCTION

SUMMARY

TO THE CURRICULUM OF THE EDUCATIONAL INSTITUTION

Specialty 7-06-0732-01 construction

Profiling industrial and civil construction

	Study mode	
	full-time	full-time
Year	1	2
Semester	1	3
Lectures, hours	34	8
Practical (seminar) classes, hours	34	8
Course project, semester	1	3
Exam, semester	1	2
Classroom hours per academic discipline	68	16
Independent work, hours	148	200
Total course duration in hours / credit units	216/6,0	

1. Summary of the academic discipline: requirements for the technical condition and operation of building structures of buildings and structures; assessment of technical condition of building structures of buildings and structures; assessment of the technical condition of reinforced concrete structures; assessment of technical condition of metal structures; assessment of the technical condition of stone structures; assessment of the technical condition of wooden structures; reinforcement of building structures; reinforcement of reinforced concrete structures; reinforcement of stone structures; reinforcement of metal structures; reinforcement of wooden structures; reinforcement of bases and foundations.

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

know: types and mechanisms of aggressive actions; reasons for non-compliance with operational requirements; algorithm for assessing the actual technical condition; methods of examination and field tests; defects and damages, degree of their influence; features of verification calculations; methods of recovery and amplification, their classification;

be able to: determine the cause of defects and damage; assess the technical condition taking into account defects and damages based on the results of examination, verification calculations and field tests; determine the need for reinforcement, perform calculation and design of restoration and reinforcement;

have a skill: fundamental knowledge in assessing the technical condition of building structures of buildings and structures; methods of scientific research of multivariate design; fundamentals of scientific research in the development and design of methods for restoring the operational qualities of building structures through the use of new, including innovative technologies, taking into account occupational safety and health, environmental and fire safety requirements in the field of construction.

3. formed competencies: To use the modern instrument base and promising methods of non-destructive testing for monitoring and diagnostics of the state of construction products, structures, buildings and structures.

4. Requirements and forms of current and intermediate certification. Current certification of students is carried out to determine the compliance of the results of their educational activities with the requirements of educational standards of higher education. The form of intermediate certification of students is an exam. Intermediate certification is carried out orally. The form of current certification is a survey on the topics of practical exercises.