

# M A T H E M A T I C S

(name of the discipline)

## ANNOTATION

### TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

#### Specialty 1-70 02 01 "Industrial and civil construction", "Car roads"

	Form of higher education		
	Full-time (daytime)	Correspondence	Correspondence abbreviated
Course	1, 2	1, 2	1
Semester	1, 2, 3	1, 2, 3	1, 2
Lectures, hours	102	24	16
Practical lessons, hours	102	24	16
Classroom examination (semester, hours)		2 (2 hours) 3 (2 hours)	2 (2 hours)
Exam, semester	1, 2, 3	1, 2, 3	1, 2
Classroom hours per academic discipline	204	52	34
Independent work, hours	300	452	470
Total hours per academic discipline / credit units	504/14		504/14

#### Specialty 6-05-0732-02 "Expertise and property management"

	Form of higher education
	Full-time (daytime)
Course	1, 2
Semester	1, 2, 3
Lectures, hours	102
Practical lessons, hours	184
Exam, semester	1, 2, 3
Classroom hours per academic discipline	186
Independent work, hours	354
Total hours per academic discipline / credit units	504/15

1. Brief content of the discipline: linear algebra and analytic geometry, vector algebra, introduction to mathematical analysis, differential and integral calculus of functions of one and many variables, differential equations, numerical and functional (power) series, probability theory and elements of mathematical statistics.

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

**know** – methods of mathematical analysis, analytical geometry, linear algebra, solution of differential equations, basic concepts and methods of probability theory and mathematical statistics, basic mathematical methods for solving engineering problems;

**be able to** – solve mathematically formalized problems of linear algebra and analytical geometry, differentiate and integrate functions, calculate integrals over a figure, solve differential equa-

tions and systems of differential equations, set and solve probabilistic problems and perform statistical processing of experimental data, to build mathematical models of physical processes;

**own** – skills of creative analytical thinking, independently generate and implement new ideas and methods.

3. Formed competencies.

Specialty 1-70 02 01 "Industrial and civil construction", "Car roads"

Codes of generated competencies	Names of competencies being formed
BOD-1	Apply knowledge of natural science academic disciplines to solve applied engineering and construction problems

Specialty 6-05-0732-02 "Expertise and property management"

Codes of generated competencies	Names of competencies being formed
BOD-1	Use the basic concepts, laws and methods of mathematics, chemistry and physics to process data and perform engineering and economic calculations

4. Requirements and forms of current and intermediate certification. Current certification: IHW – individual homework; ICP – intermediate control of progress. Intermediate certification: exam. Assessment of the level of knowledge of the student and the formation of competencies in all forms of control is carried out on a ten-point scale.