M A T H E M A T I C S

(name of the discipline)

COURSE SYLLABUS ABSTRACT
of higher education institution speciality

1-70 03 01 "Motor roads"

(speciality code and name)

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	1, 2	1,2	1
Semester	1, 2, 3, 4	1,2,3,4	1,2
Lectures, hours	184	38	22
Practical classes (seminars), hours	168	38	22
Laboratory classes, hours	16	4	
In-class test (semester, hours)	–	1 (2 часа), 2 (2 часа), 3 (2 часа)	1 (2 часа), 2 (2 часа)
Pass/fail, semester	4	4	1
Exam, semester	1, 2, 3	1,2,3	2, 3
Contact hours	368	86	48
Independent study, hours	176	458	496
Total course duration in hours / credit units	544 / 14		

1. Course outline: 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. Course learning outcomes. Upon completion of the course, students will be expected to:

know – the basic concepts, definitions and methods of linear and vector algebra, analytic geometry, differential and integral calculus, the theory of numerical and functional (power) series, the theory of differential equations, the theory of probability;

be able to – analyze and apply theoretical knowledge in solving typical educational tasks and tasks of increased complexity, draw reasonable conclusions;

possess – mathematical provisions and tools of the discipline in solving practical problems that may arise in the study of natural science academic disciplines and in solving applied engineering and construction problems.

3. Competencies: BOD-1 – apply knowledge of natural science disciplines for experimental and theoretical study, analysis and solution of applied engineering problems.

4. Requirements and forms of midcourse evaluation and summative assessment. Intermediate certification: IHW – individual homework; CLW – control and laboratory work; ICP – intermediate control of progress. Current certification: exam, pass/fail. The development of this academic discipline will ensure the formation of the required competence of BOD-1.