

MATHEMATICS

(course title)

COURSE SYLLABUS ABSTRACT of higher education institution speciality

1-36 01 04 Equipment and Technologies of Highly Effective Processes of Materials Processing
(speciality code and name)

	STUDY MODE
	full-time
Year	1, 2
Semester	1, 2, 3
Lectures, hours	136
Practical classes (seminars), hours	136
In-class test (semester, hours)	-
Exam, semester	1, 2, 3
Contact hours	272
Independent study, hours	160
Total course duration in hours / credit units	432 / 12

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, functions of a complex variable, probability theory and elements of mathematical statistics.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know: basic concepts, definitions and methods of linear and vector algebra, analytic geometry, differential and integral calculus, theory of numerical and functional (power) series, theory of differential equations, complex variable functions, probability theory, mathematical statistics;

be able to: analyze and apply theoretical knowledge when solving typical academic problems and problems of increased complexity, draw valid conclusions;

possess: the 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. BPC-1. Possess the basic concepts and methods of linear algebra, analytical geometry, mathematical analysis, be able to apply the knowledge gained to solve theoretical and practical problems.

4. Requirements and forms of midcourse evaluation and summative assessment. Midcourse evaluation: ZIZ - protection of individual assignments; CR - control work; ICS - intermediate control of progress. Summative assessment: exam. Assessment of the level of student knowledge and competence at all forms of control is made on a ten-point scale.