HIGHER MATHEMATICS

COURSE SYLLABUS ABSTRACT
of higher education institution

Specialty: 6-05-0713-04 Automation of technological processes and production
Profiling: Automation of technological processes and production in mechanical engineering

	STUDY MODE
	full-time
Year	1, 2
Semester	1, 2, 3
Lectures, hours	118
Practical (seminar) classes, hours	118
Exam, semester Test, semester	1, 2 3
Contact hours	236
Independent study, hours	412
Total course duration in hours / credit units	648 / 18,0

Specialty: 6-05-0713-04 Automation of technological processes and production
Profiling: Automated electric drives

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	1, 2	1, 2	1
Semester	1, 2, 3	1, 2, 3	1, 2
Lectures, hours	118	24	18
Practical (seminar) classes, hours	134	24	14
In-class test (semester, hours)		2 (2 hours), 3 (2 hours)	2 (2 hours)
Exam, semester	1, 2, 3	1, 2, 3	1, 2
Contact hours	252	52	34
Independent study, hours	324	524	542
Total course duration in hours / credit units	576 / 16,0		

1. Brief content of the academic discipline: linear algebra and analytical 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. As a result of mastering the academic discipline, the student must:
know the basic concepts, definitions and methods of the higher mathematics course;
be able to - analyze and apply theoretical knowledge when solving standard educational problems and problems of increased complexity, draw informed conclusions;
have the skill:
– creative analytical thinking;
– independently generate and implement new ideas and methods.

3. Competencies being formed:

UK-2. Solve standard problems of professional activity based on the use of information and communication technologies.

BOD-1. Use the laws of natural sciences in professional practice.

4. Requirements and forms of current and intermediate certification. Current certification: ZIZ – protection of an individual assignment; PKU – intermediate progress control. Interim certification: exam, test. Assessment of the student's level of knowledge and the development of competencies in all forms of control is carried out on a ten-point scale.