MATHEMATICAL ANALYSIS

COURSE SYLLABUS ABSTRACT
of higher education institution

Speciality 1-28 01 02 – Digital Marketing

	STUDY MODE			
	full-time		part-time	
Year	1		1	2
Semester	1	2	2	3
Lectures, hours	50	34	12	6
Practical classes (seminars), hours	34	50	8	10
In-class test (semester, hours)				2 (hours)
Exam, semester		2		3
Pass/fail, semester	1		2	
Contact hours	84	84	20	18
Independent study, hours	60	60	124	126
Total course duration in hours / credit units	144/4	144/4	144/4	144/4
	288/8		288/8	

1. Course outline**:** Introduction to mathematical analysis. Complex numbers. Polynomials**.** Differential calculus of functions of one variable. Integral calculus of functions of one variable. Differential calculation of functions of many variables. Integral calculus of functions of many variables. Differential equations and systems. Numeric and functional series.

2. Course learning outcomes. Upon completion of the course, students will be expected to

– know: basic provisions of mathematical analysis of functions of one and several variables; complex numbers, polynomials and their divisiveness**;** the foundations of series theory and ordinary differential equations;

– be able to differentiate and integrate functions; solve the simplest differential equations integrated in quadratures; decompose functions into power rows; apply differential and integral calculus operations to solve specific problems;

– possess: by methods of the analytical and numerical solution of the algebraic and ordinary differential equations; creative and analytical thinking skills.

3. Competencies formed: have the skills of creative and analytical thinking (SC-12); to apply methods of differential and integral calculus, apparatus of theory of power and functional series for constructing and researching mathematical models of applied problems (BPC-2).

4. Requirements and forms of midcourse evaluation and summative assessment

Modular rating system is used. Intermediate certification: control works. Current certification: offset, exam.