

FACULTY:	Faculty of Electronics and Computer Science
FIELD OF STUDY:	Computer Science
ERASMUS COORDINATOR OF THE FACULTY:	Robert Wirski, PhD
E-MAIL ADDRESS OF THE COORDINATOR:	robert.wirski@tu.koszalin.pl
COURSE TITLE:	Mathematical Analysis and Linear Algebra
LECTURER'S NAME:	Dariusz Jakóbczak, PhD
E-MAIL ADDRESS OF THE LECTURER:	dariusz.jakobczak@tu.koszalin.pl
ECTS POINTS FOR THE COURSE:	6.0
ACADEMIC YEAR:	2021/2022
SEMESTER: (W – winter, S – summer)	S
HOURS IN SEMESTER:	60
LEVEL OF THE COURSE: (1 st cycle, 2 nd cycle, 3 rd cycle)	1 st cycle
TEACHING METHOD: (lecture, laboratory, group tutorials, seminar, other-what type?)	Lecture – 30h Group tutorials – 30h
LANGUAGE OF INSTRUCTION:	English
ASSESSMENT METHOD: (written exam, oral exam, class test, written reports, project work, presentation, continuous assessment, other – what type?)	written exam, class test
COURSE CONTENT:	Features and graphs of elementary functions (polynomial, homographic, exponential, logarithmic, trigonometric, cyclometric), domain, roots, monotonicity, asymptotics, inverse function, continuous function, derivative of function, calculation of derivative from definition, formulas for derivatives, extremum, convexity, first and second derivative, Taylor series, MacLaurin formula, integrals, method and use of integrals. Matrices (operations, dimensions, features), determinant, inverse matrix, orthogonal matrix, system of equations (methods

	to solve), Cramer formulas, eigenvalues, eigenvectors, complex numbers (definitions, operations, features), trigonometric and exponential way for complex numbers, equations with complex numbers, analytic geometry in 2D (curves, transformations via matrix operations), analytic geometry in 3D (surfaces, transformations via matrix operations).
ADDITIONAL INFORMATION:	

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