

Subject card

Subject name and code	Linear algebra with geometry I, PG_00155214						
Field of study	Mathematics						
Date of commencement of studies	October 2024		Academic year of realisation of subject			2024/2025	
Education level	undergraduate studies		Subject group			Obligatory subject group in the field of study	
Mode of study	full-time studies		Mode of delivery			at the university	
Year of study	1		Language of instruction			Polish not applicable	
Semester of study	1		ECTS credits			8.0	
Learning profile	academic		Assessment form				
Conducting unit	Faculty of Mathematics, Physics and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. Andrzej Szczepański				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	45.0	0.0	0.0	0.0	75
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	75		10.0		115.0	200
Subject objectives	not-applicable						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[MATL3_U09] is able to plan how to solve a specific problem and prepare a correct record of this solution, providing strict and precise justification for the correctness of his reasoning	not-applicable	[SU4] test/exam - oral or written
	[MATL3_W03] knows and understands the basic concepts, methods and theorems of linear algebra and analytical geometry, as well as basic examples both illustrating specific concepts in these fields and enabling the refutation of erroneous hypotheses or unauthorized reasoning	not-applicable	[SW4] test/exam - oral or written
	[MATL3_U01] is able to correctly use the known concepts of mathematical logic and set theory, is able - at a simple and medium level of difficulty - to apply the known theorems and methods of these fields and is able to interpret the obtained results	not-applicable	[SU3] text preparation/written work
	[MATL3_K02] is ready to precisely formulate questions to deepen his/her own understanding of a given topic or to find missing elements of reasoning	not-applicable	[SK1] oral statement/conversation/discussion
	[MATL3_K09] is ready to critically evaluate arguments, find gaps in reasoning and constructively criticize other people's reasoning	not-applicable	[SK1] oral statement/conversation/discussion
	[MATL3_K01] is ready to accept the limitations of his/her own knowledge and understands the need for further education	not-applicable	[SK8] observation of student's independent or team work
	[MATL3_W04] knows and understands the basic concepts, methods and theorems of general algebra as well as basic examples that both illustrate specific concepts from these fields and enabling the refutation erroneous hypotheses or unauthorized reasoning	not-applicable	[SW4] test/exam - oral or written
	[MATL3_K06] is ready to formulate opinions on basic mathematical issues	not-applicable	[SK1] oral statement/conversation/discussion
	[MATL3_W09] knows and understands the role and importance of proof in mathematics, as well as the concept of the importance of assumptions	not-applicable	[SW4] test/exam - oral or written
	[MATL3_W01] knows and understands the basic concepts, methods and theorems of mathematical logic and set theory, as well as basic examples illustrating specific concepts in these fields and enabling the refutation erroneous hypotheses or unauthorized reasoning	not-applicable	[SW4] test/exam - oral or written
	[MATL3_U08] is able to formulate definitions and theorems in an understandable way, both orally and in writing, and present correct mathematical reasoning regarding the acquired issues	not-applicable	[SU4] test/exam - oral or written
	[MATL3_U04] is able to correctly use the acquired concepts of general algebra, is able - at a simple and medium level of difficulty - to apply the known theorems and methods of these fields and is able to interpret the obtained results	not-applicable	[SU3] text preparation/written work

	Course outcome	Subject outcome	Method of verification
	[MATL3_W08] knows and understands the structure of mathematical theories, is able to use mathematical formalism to build and analyze simple mathematical models in other fields of science	not-applicable	[SW4] test/exam - oral or written
	[MATL3_U03] is able to correctly use the acquired concepts of linear algebra and geometry, is able - at a simple and medium level of difficulty - to apply the known theorems and methods in these fields and is able to interpret the obtained results	not-applicable	[SU3] text preparation/written work
	[MATL3_K04] is ready to understand and appreciate the importance of intellectual honesty in one's own and other people's actions; is willing to act ethically	not-applicable	[SK8] observation of student's independent or team work
Subject contents	not-applicable		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		100.0%	0.0%
		50.0%	30.0%
		50.0%	40.0%
		50.0%	30.0%
Recommended reading	Basic literature	not applicable	
	Supplementary literature	not applicable	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	What are linear independent vectors ? Exercise: Give a proof that linear dimension of vector		
Work placement	Not applicable		

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