

Subject card

Subject name and code	, PG_00208684						
Field of study	Mathematics						
Date of commencement of studies	October 2024		Academic year of realisation of subject			2026/2027	
Education level	Bachelor's studies		Subject group				
Mode of study	full-time studies		Mode of delivery			at the university	
Year of study	3		Language of instruction			Polish	
Semester of study	6		ECTS credits			7.0	
Learning profile	academic		Assessment form			credit	
Conducting unit	Division of Didactics of Mathematics -> Institute of Mathematics -> Faculty of Mathematics, Physics and Informatics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Elżbieta Mrożek				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	30.0	30
	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	30		5.0		15.0	50
Subject objectives	The aim is to prepare students to report on selected topics and write a term paper.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[MATL3_K05] is ready to independently search for information in literature, also in foreign languages	is able to independently search for information in specialist literature, preparing presentations in front of a group	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[MATL3_K10] is ready to analyze data and communicate the conclusions of such analysis in an accessible form	analyzes texts and draws conclusions	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[MATL3_W14] knows and understands the basic concepts and principles of industrial property protection and copyright, is able to use patent information resources	gains knowledge about copyright and intellectual property	[SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report
	[MATL3_W13] knows and understands the legal and ethical conditions related to scientific and teaching activities	acquires knowledge about legal and ethical conditions in scientific activities	[SW1] oral statement/conversation/discussion
	[MATL3_U16] can speak about mathematical problems in understandable colloquial language	acquires the ability to express mathematical content in speech and writing, is able to define his/her interests in mathematical discussions	[SU1] oral statement/conversation/discussion [SU8] observation of student's independent or team work
	[MATL3_K09] is ready to critically evaluate arguments, find gaps in reasoning and constructively criticize other people's reasoning	is able to think and act in an entrepreneurial manner	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team 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	understands the importance of intellectual honesty in one's own and other people's actions	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[MATL3_K06] is ready to formulate opinions on basic mathematical issues	actively participates in the seminar and is able to formulate questions that serve to deepen one's understanding of a given topic or to find missing elements of reasoning	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team 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	is able to independently search for information in specialist literature, preparing presentations in front of a group	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[MATL3_K01] is ready to accept the limitations of his/her own knowledge and understands the need for further education	knows the limitations of his own knowledge and understands the need for further education	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[MATL3_U15] has the ability to prepare oral presentations in Polish and at least one foreign language about selected mathematical issues using various sources of knowledge	is able to prepare oral presentations, is able to prepare a report and conduct its presentation on a given topic, is also able to prepare appropriate texts in written form	[SU6] demonstration of practical skills
Subject contents	1. Issues related to proof in mathematics lessons and problem-based learning. 2. Constructivist methods of introducing selected mathematical concepts. 3. Non-standard methods of solving tasks, ways of organizing classes developing abilities and interests in mathematics. 4. Mathematical curiosities. 5. Using multimedia in teaching.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	project	51.0%	100.0%
	Observation of student's attitude	51.0%	0.0%

Recommended reading	Basic literature	1. P.J. Davis, R. Hersh, The World of Mathematics, PWN Scientific Publishing House, Warsaw 1994. 2. M. Szurek, On Teaching Mathematics, Gdańskie Wydawnictwo Oświatowe, Gdańsk, 2006. 3. The World is Mathematical, selected volumes 4. Mathematical Miniatures, selected volumes 5. Didactica Mathematicae and Mathematics in School, selected issues
	Supplementary literature	not applicable
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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