



## Subject card

Subject name and code	Mathematics I, PG_00055840						
Field of study	Architecture						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2021/2022		
Education level	first-cycle 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		
Semester of study	1		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Mathematics Center -> Vice-Rector for Education						
Name and surname of lecturer (lecturers)	Subject supervisor		mgr Katarzyna Kujawska				
	Teachers		mgr Katarzyna Kujawska				
			mgr Dorota Garbowska				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	30.0	0.0	0.0	0.0	45
	E-learning hours included: 0.0						
	Adresy na platformie eNauczanie: WA-A-Matematyka I-2021/22 (K.Kujawska) - Moodle ID: 14933 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14933">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14933</a>						
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	45		8.0		47.0	100
Subject objectives	Students obtain competence in the range of using methods of mathematical analysis ang linear algebra and knowledge how to solve simple problems that can be found in the field of engineering.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W01] knows and understands construction problems, building and engineering issues related to building design; principles, solutions, constructions and building materials used in simple engineering tasks in the field of architectural and urban design		Student examines the position of lines and planes in space Student solves equations and inequalities with elementary functions Student evaluates the limits of sequences Student gives a graphic interpretation of discontinuity points		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_U04] is able to use analytical methods to formulate and solve project tasks		Student recognizes the importance of skillful use of basic mathematical apparatus in terms of study in the future.		[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
Subject contents	1. Elementary functions 2. Sequences 3. Limit of the function 4. Continuity of a function 5. Elements of linear algebra 6. Analytic geometry in three- dimensional space 7. Conic curves						
Prerequisites and co-requisites	No requirements.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	activity		0.0%		10.0%		
	midterm colloquium		50.0%		90.0%		

Recommended reading	Basic literature	<ul style="list-style-type: none"> <li>• "Matematyka - podstawy z elementami matematyki wyższej" WPG</li> <li>• K.T.Jankowscy "Zbiór zadań z matematyki" WPG</li> <li>• KT. Jankowscy Zadania z matematyki wyższej WPG</li> <li>• M.Gewert, Z.Skoczylas "Analiza matematyczna I - Przykłady i zadania"</li> </ul>
	Supplementary literature	<ul style="list-style-type: none"> <li>• W.Krysicki, L.Włodarski "Analiza matematyczna w zdaniach I"</li> <li>• W.Stankiewicz "Zadania z matematyki dla wyższych uczelni technicznych I"</li> </ul>
	eResources addresses	WA-A-Matematyka I-2021/22 (K.Kujawska) - Moodle ID: 14933 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14933">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=14933</a>
Example issues/ example questions/ tasks being completed	1. Find the domain and range of the function $f(x)=\dots$ . Determine the inverse function of $f$ 2. Evaluate the limit of the given sequence $(a_n)$ 3. Evaluate the limit of the given function $f(x)=$ at the point $x_0=$ 4. Analyse the continuity of the following function $f(x)=$ 5. Show that the points A, B, C, D do not lie on the plane. 6. Discuss the relative position of the given lines $l_1$ and $l_2$ .	
Work placement	Not applicable	

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