

Subject card

Subject name and code	Probability and Statistics, PG_00190255						
Field of study	Historical game design						
Date of commencement of studies	October 2026	Academic year of realisation of subject				2027/2028	
Education level	Bachelor's 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	2	Language of instruction				Polish	
Semester of study	3	ECTS credits				2.0	
Learning profile	academic	Assessment form				credit	
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Paweł Klinga				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0	15
	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	15		0.0		35.0	50
Subject objectives	The aim of the course is to familiarize students with the basic concepts of probability theory and statistics, as well as their practical application.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[PGHL3_U02] Selects appropriate methods and tools, including information and communication techniques, to address specific problems		The student independently selects and applies appropriate probabilistic and statistical methods, using relevant digital tools to address a specific problem.			[SU4] test/exam - oral or written	
	[PGHL3_W07] Explains the possibilities of applying selected methods of analysis and interpretation of historical sources in the game development process		The student understands the importance of quantitative methods in the analysis of source materials and is able to indicate their relevance in the process of historical game design.			[SW4] test/exam - oral or written	
Subject contents	Probability space Conditional probability, total probability, Bayes theorem, independence of events Discrete and continuous random variables Probability distribution and cumulative distribution function of a random variable Overview of standard probability distributions Statistics of random variables: expected value, variance, moments, quantiles						
Prerequisites and co-requisites	Knowledge of elementary mathematical tools.						
Assessment methods and criteria	Subject passing criteria		Passing threshold			Percentage of the final grade	
	Exam		51.0%			100.0%	

Recommended reading	Basic literature	A. Plucińska, E. Pluciński, Probabilistyka: Rachunek prawdopodobieństwa. Statystyka matematyczna. Procesy stochastyczne, W. Kryszicki, J. Bartos, W. Dyczka, K. Królikowska, M. Wasilewski, Rachunek prawdopodobieństwa i statystyka matematyczna w zadaniach część I i II
	Supplementary literature	G. Krzykowski, M. Szreder, Rachunek prawdopodobieństwa i statystyka matematyczna, cz. I S. Zubrzycki, Wykłady z rachunku prawdopodobieństwa i statystyki matematycznej Freund, Miller, Miller John E. Friends, Mathematical Statistics with Applications
	eResources addresses	
Example issues/ example questions/ tasks being completed	Calculating probability from a given distribution Distinguishing probability distribution Finding average, variance and other statistics from a given data set	
Work placement	Not applicable	

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