

Subject card

Subject name and code	Probability and Statistics, PG_00143831						
Field of study	Informatics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study		
Mode of study	part-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		5.0		
Learning profile	academic		Assessment form				
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	20.0	20.0	0.0	0.0	0.0	40
	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	40		0.0		85.0	125
Subject objectives	The aim of the course is to familiarize students with basic concepts of probability and statistics, including their practical applications.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[INFL3_W02] has knowledge of discrete mathematics and probabilistic methods and statistics		knows basic definitions, theorems and methods of probability theory and statistics		[SW4] test/exam - oral or written		
	[INFL3_U01] can apply mathematical knowledge to formulate, analyze and solve problems related to computer science		verifies basic properties of probability spaces and random variables		[SU4] test/exam - oral or written [SU8] observation of student's independent or team work		
Subject contents	Probability space						
	Conditional probability, total probability, Bayes formula, independence of events						
	Discrete and continuous random variables						
	Distribution of probability and the cumulative distribution function of a random variable						
	Survey of standard probability distributions						
	Statistics of random variables: mean, variance, moments, quantiles						
Prerequisites and co-requisites	The course requires the knowledge of mathematical analysis and combinatorics, as it is presented on the courses of Mathematical Analysis and Discrete Mathematics.						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exam	51.0%	100.0%
Recommended reading	Basic literature	used during classes 1. A. Plucińska, E. Pluciński, Probabilistyka: Rachunek prawdopodobieństwa. Statystyka matematyczna. Procesy stochastyczne, 2. P. Biecek, Przewodnik po pakiecie R, self-study 1. W. Krywicki, J. Bartos, W. Dyczka, K. Królikowska, M. Wasilewski, Rachunek prawdopodobieństwa i statystyka matematyczna w zadaniach część I i II 2. J. Verzani, Using R for Introductory Statistics, 3. J. Wierzbński, Statystyka opisowa,	
	Supplementary literature	1. G. Krzykowski, M. Szreder Rachunek prawdopodobieństwa i statystyka matematyczna, cz. I 2. S. Zubrzycki Wykłady z rachunku prawdopodobieństwa i statystyki matematycznej 3. Freund, Miller, Miller John E. Friends Mathematical Statistics with Applications	
	eResources addresses		
	Example issues/ example questions/ tasks being completed	Finding probability from a given distribution	
Work placement	Not applicable		

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