

Subject card

Subject name and code	Probability and Statistics, PG_00143831						
Field of study	Informatics						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
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 Polish		
Semester of study	2	ECTS credits			5.0		
Learning profile	academic	Assessment form			exam		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Paweł Klinga				
	Teachers		dr Paweł Klinga				
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	<ol style="list-style-type: none"> 1. Probability space. 2. Conditional probability and independence of events. 3. Distribution of probability and the cumulative distribution function of a random variable. 4. Moments and quantiles of probabilistic distributions. 5. Empirical distribution of a sample. 6. Statistical inference and estimation. 						
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		
	Activity during lectures		0.0%		10.0%		
	Exam		50.0%		90.0%		

Recommended reading	Basic literature	<p>used during classes</p> <ol style="list-style-type: none"> 1. A. Plucińska, E. Pluciński, Probabilistyka: Rachunek prawdopodobieństwa. Statystyka matematyczna. Procesy stochastyczne, 2. P. Biecek, Przewodnik po pakiecie R, <p>self-study</p> <ol style="list-style-type: none"> 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. Wierziński, Statystyka opisowa,
	Supplementary literature	<ol style="list-style-type: none"> 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	not applicable	
Work placement	Not applicable	

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