

GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	STATISTICS , PG_00053791								
Field of study	Management								
Date of commencement of studies	October 2022		Academic year of realisation of subject			2022/2023			
Education level	second-cycle studies		Subject group			Optional subject group Subject group related to scientific research in the field of study			
Mode of study	Full-time studies		Mode of delivery			at the university			
Year of study	1		Language of instruction			English			
Semester of study	1		ECTS credits			4.0			
Learning profile	general academic profile		Assessment form			exam			
Conducting unit	Faculty of Management and Economics								
Name and surname	Subject supervisor		prof. dr hab. Stanisław Kot						
of lecturer (lecturers)	Teachers		prof. dr hab. S	Stanisław Kot					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	;t	Seminar	SUM	
	Number of study hours	15.0	0.0	30.0	0.0		0.0	45	
	E-learning hours included: 0.0								
	Statistics 2022_23 - Moodle ID: 26600 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26600								
Learning activity and number of study hours	Learning activity	Participation ir classes includ plan	n didactic led in study	Participation in consultation hours		Self-study		SUM	
	Number of study hours	45		8.0		47.0		100	
Subject objectives	Acquiring the ability to use statistics to analyze the business and economic phenomena, with the use of IT tools.								
Learning outcomes	Course outcome		Subject outcome			Method of verification			
	[K7_U03] uses mathematical modelling to formulate hypotheses about the behaviour of various subjects and verifies them using advanced statistical and econometric methods		The student uses correct methods in the analysis of statistical data			[SU4] Assessment of ability to use methods and tools			
	[K7_W07] knows in depth selected methods and techniques of data acquisition, enabling analysis and modelling of structures and socio- economic relations, processes taking place and their impact on the implementation of objectives of the organization, including government administration, local government and non-profit organizations		The student knows the selected statistical methods and tools used in making business decisions			[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects			

Subject contents	1.Elements of probability. The axioms of the probability theory						
	2. Random variables an their distributions. Discrete and continuous random variables						
	 3. Parameters of random variables: expected value, moments 4. Selected distributions of random variables (Bernoulli, Poison, Gaussian) 5. The distribution in the sample. Visualisation by histograms 6. Measures of statistical location: arithmetic mean median quantiles 						
	o. measures or stausucar location: anthmetic mean, median, quantiles.						
	7 Measures of dispersion (variance, standard deviation, coefficient of variation						
	 Measures of dispersion (variance, standard deviation, coefficient of variation Measures of skewness and concentration 						
	8. Measures of skewness and concentration.						
	 9 Measures of economic inequality (Gini, Pietra) 10. Two-dimensional random variables; and their parameters. Pearsons coefficients of correlation 						
	11. Correlation between qualitative variables. Spearmans coefficient of correlation.						
	12. The regression: function for two variables						
	13. Multivariate regression function						
	14. Statistical indices (aggregate indices price, volume and value. (Laspeyres, Paasche and Fisher)						
	. Classical analysis of time series (Census I method).						
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Prerequisites							
and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade				
	Tests	60.0%	50.0%				
Recommended reading	Basic literature McClave et al. (2008) Statistics for Rusiness and Economics. Dev						
	Education International						
	Supplementary literature Freedman et al., Statistics						
Example issues/	exesources addresses Compare two groups using descriptive statistics based on the data provided. Interpret the results						
example questions/ tasks being completed	Compare two groups using descriptive statistics based on the data provided. Interpret the results.						
0 1	In a certain population of men their h	tion of men their heights and weights have following characteristics:					
	average height = 68 inchesstatndard deviation = 3 inchesaverage weight = 160 poundsstandard deviation = 40 poundsPearsons correlation =						
	0.4 Predict the woight of a man when his	4 redict the weight of a man when his height is 74 inches					
Work placement	Not applicable						