GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	NON-CLASSICAL METHODS OF STATISTICS, PG_00060823						
Field of study	Economic Analytics						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
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	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor						
	Teachers						

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0	45
	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	45	4.0	26.0	75

Subject objectives	Creates non-parametric estimation models and performs non-parametric verification of statistical hypotheses, taking into account the economic context, efficiently using the R package

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U03] Formulates research hypotheses and selects appropriate analytical methods for their verification, utilizing advanced IT tools, and critically evaluates the obtained results.	formulates research problems, solves them and critically evaluates them using non-classical, non-parametric methods of statistical inference using the R package	[SU3] Assessment of ability to use knowledge gained from the subject
	[K7_W05] Possesses in-depth knowledge of the principles of integrating economic, legal, and ethical contexts in analyses and applying them in entrepreneurial activities while respecting copyright protection rules	implements responsibly innovative methods of non-parametric estimation replacing the traditional approach in many practical economic applications	[SW1] Assessment of factual knowledge

Subject contents	Non-parametric estimation of distribution parameters
	Estimation of the distribution function and the density function
	Regression function estimation
	Non-parametric verification of statistical hypotheses
	Multidimensional normality tests
	Compatibility tests for composite samples
	Tests for samples with censored data
	Bootstrap methods

Prerequisites and co-requisites	

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exam	60.0%	50.0%
	Project	60.0%	50.0%

Recommended reading	Basic literature	Domański Cz., K. Pruska (2000) Nieklasyczne metody statystyczne, PWE, Warszawa Silverman B.W. "Density estimation for statistics and data analysis", New York, Chapman and Hall, 1986 Nonparametric Statistical Methods, Third Edition, Myles Hollander, Douglas A. Wolfe, Eric Chicken, 2015

	Supplementary literature	Nonparametric Statistical Methods Using R, John Kloke, Joseph W. McKean, Chapman and Hall/CRC, 2014
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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