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 2023	Academic year of realisation of subject	2024/2025
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	English
Semester of study	3	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Katedra Statystyki i Ekonometrii -> Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Karol Flisikowski	
	Teachers	dr inż. Karol Flisikowski	

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	3.0	27.0	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_W05] takes into account in the analyzes in an in-depth way both the economic, legal and ethical context, being aware of the responsibility for the consequences of its decisions	implements responsibly innovative methods of non-parametric estimation replacing the traditional approach in many practical economic applications	[SW1] Assessment of factual knowledge
[K7_U03] formulates research problems and selects appropriate analytical methods for their effective solution, using advanced IT tools, and evaluates the results critically	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

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
Project	60.0%	50.0%
Exam	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	