GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	STATISTICS II, PG_00061103		
Field of study	Management		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2023/2024
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study 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 Lectures and laboratories will be carried in English
Semester of study	2	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Statistics and Econometrics -> Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. Stanisław Kot	
	Teachers	dr Olgun Aydin prof. dr hab. Stanisław Kot	

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	6.0	49.0	100

Subject objectives

Uses appropriately selected statistical methods to analyze business data, making a critical assessment of the results obtained

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U02] presents logical and solid arguments about the obtained results, by analyzing and synthesizing information in various business contexts, approaching their interpretation critically	critically interprets the obtained analysis results, taking into account the broad business context	[SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject
[K7_W02] explains the meaning and interdependence of the key components describing economic processes, using in-depth knowledge consistent with the main trends in the development of scientific disciplines related to the field of study	explains the meaning and interdependence of key components describing economic phenomena using statistical methods for their analysis	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects

Subject contents

Probability and its properties
Basic principles of probabilities, Bayes' theorem
Random variables, parameters of distributions
Discrete (including: binomial, Poisson) and continuous (including: uniform, normal) distributions
Population and sample, sample distributions and statistics, estimators
Confidence intervals for the mean and proportion
Determining the sample size
Testing statistical hypotheses
Mean and ratio tests for one and two samples
Chi-square test
Nonparametric tests
Tests in correlation analysis
Least squares method - linear and linearized models
Maximum likelihood method

<table>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Tutorial tasks</td><td>60.0%</td><td>50.0%</td></tr>
<tr><td>Test</td><td>60.0%</td><td>50.0%</td></tr>
</table>
</td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>McClave J.T., Benson P.G., Sincich T. (2008), Statistics for Business and Economics, Pearson/Prentice Hall
Aczel A.D. (1989), Complete Business Statistics, Irwin</td></tr>
<tr><td>Supplementary literature</td><td>Newbold P., Carlson W.L., Thorne B.M., Statistics for Business and Economics, Pearson
Miller I., Miller M., John E. Freund's mathematical statistics with applications, Pearson/Prentice Hall
Wackerly D., Mendenhall W., Scheaffer R.L., Mathematical statistics with applications, Thomson Brooks/Cole</td></tr>
<tr><td>eResources addresses</td><td>Podstawowe
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=36602 - Power point presentations of successive lectures
Uzupełniające
Adresy na platformie eNauczanie:
Statistics II 2024 - Moodle ID: 36602
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=36602</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">Examples

What are basic properties of the Normal distribution?

The sample mean as the ubiased and a consisten estimator of the population mean.

Estimating regression functions

Testing the goodness of fit of a theoretical distribution

Testing differences between population means when samples are independent</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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