GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	INSURANCE STATISTICS, PG_00067529		
Field of study	Economic Analytics		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2025/2026
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	Polish
Semester of study	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department Of Statistics And Econometrics -> Faculty Of Management And Economics -> Wydziały Politechniki Gdańskiej		
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	5.0	25.0	75

Subject objectives

Explains the functioning of the insurance market by analyzing various insurance products, presenting and convincingly interpreting the results obtained

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U04] is able to prepare and convincingly present the results of specialized analyses, providing in-depth interpretation during debates and meetings with various audiences.	analyzes insurance products based on historical and demographic data and presents the results in a convincing way along with professional interpretation	[SU3] Assessment of ability to use knowledge gained from the subject
[K7_W06] knows and understands the principles of evaluating the reliability of utilized data, applying in-depth specialized knowledge in the field of economic analysis.	identifies reliable sources of information needed to analyze the insurance market by analyzing various risks using statistical tools and methods	[SW1] Assessment of factual knowledge

Subject contents

Elements of the calculus of probability especially used in insurance (conditional probability, total probability, Bayesian formula)
Probability distributions used in insurance risk assessment
Testing the fit of theoretical insurance risk distributions based on historical data
Calculation of net premiums in various insurance variants
Gross premium calculation
Life expectancy tables, their construction and application
Commutation functions and their application in the calculation of insurance premiums
Analysis of life insurance markets in Poland and in the world

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Test	60.0%	100.0%

Recommended reading

Basic literature	Ubezpieczenia na życie. Teoria i praktyka, Eugeniusz Stroiński, Wydawnictwo Poltext z serii Ubezpieczenia, Warszawa 2004 Nowe zasady ubezpieczeń majątkowych i osobowych. Poradnik, T. Jakubowski, Warszawa 1991
Supplementary literature	Podstawy ubezpieczeń, tom II produkty, pod redakcją Jana Monkiewicza, Wydawnictwo Poltext, seria: Ubezpieczenia, Warszawa 2005 (wydanie i - 2001)

	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Problems in the theory of probability (using e.g. the Bayes formula) Calculation of the net premium in various variants Calculation of the net premium for various insurances Application of commutation functions Theoretical questions about the functioning of the insurance market in Poland and in the world	
Work placement	Not applicable	

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