



Subject card

Subject name and code	INSURANCE STATISTICS, PG_00037232						
Field of study	Economic Analytics						
Date of commencement of studies	October 2022	Academic year of realisation of subject	2022/2023				
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	Part-time studies	Mode of delivery	at the university				
Year of study	1	Language of instruction	Polish				
Semester of study	2	ECTS credits	4.0				
Learning profile	general academic profile	Assessment form	assessment				
Conducting unit	Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr Mariusz Kaszubowski					
	Teachers	dr Mariusz Kaszubowski					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	8.0	16.0	0.0	0.0	0.0	24
	E-learning hours included: 0.0						
Statystyka ubezpieczeniowa (2023 niestacjonarne) - Moodle ID: 30094 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=30094							
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	24	8.0	68.0	100		
Subject objectives	Aim of the course - Understanding the basic concepts of probability and its application in the risk insurance. - Knowledge of the most commonly used probability distributions, their properties and applications in insurance issues. - The student understands the basic concepts of insurance. - The student is able to verify a basic insurance products including net premiums.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U09] has the ability to use advanced mathematical tools to analyse and assess economic phenomena and to make decisions by economic operators	Student can analyze the problem, to choose the right tools and present the results. Can participate in the preparation of basic insurance products, taking into account the different risk using tools and statistical methods.	[SU1] Assessment of task fulfilment
	[K7_W11] has a broadened knowledge of socio-economic phenomena and processes, understanding their determinants and consequences	The student, on the basis of knowledge, draw correct conclusions about the real problems of the insurance statistics	[SW1] Assessment of factual knowledge
	[K7_U14] can improve oneself through the systematic acquisition of knowledge and skills	The student is able to perform an analysis of insurance products on the basis of historical data and demographics.	[SU1] Assessment of task fulfilment
	[K7_W07] has an in-depth knowledge on methods of social and economic phenomena description, including market information acquisition techniques and methods of analysis and modelling of economic processes	The student has knowledge of the market life insurance and property insurance in Poland and in the World	[SW1] Assessment of factual knowledge
[K7_W02] has a broadened knowledge of how to describe economic phenomena using quantitative methods	The student has the ability to assess underwriting risk and selection of appropriate statistical techniques to assess its likelihood	[SW1] Assessment of factual knowledge	
Subject contents	Elements of probability especially used in insurance (conditional probability, total probability, Bayes' formula). Probability distributions used in the assessment of risk insurance. Test of fit of theoretical distributions insurance risks based on historical data. The calculation of net premiums in various forms of insurance. The calculation of gross premiums. Tables of life expectancy, their design and application. Switching functions and their use in the calculation of insurance premiums. The analysis of life insurance in Poland and in the World.		
Prerequisites and co-requisites	Descriptive Statistics Mathematical Statistics		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Final test	60.0%	100.0%
Recommended reading	Basic literature	Ubezpieczenia na życie. Teoria i praktyka Eugeniusz Stroński, 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	Uzupełniająca https://enauczanie.pg.edu.pl/moodle/course/view.php?id=30094 -	
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> 1. Theory of probability (use of Bayes' formula) 2. The calculation of net premiums in various insurances 3. Calculation of net premiums for different insurances 4. The use of the commutation functions 5. Questions concerning the theoretical functioning of the insurance market in Poland and abroad 		
Work placement	Not applicable		