

Annex No. 3		Second Cycle Studies Subject Programme			
1.	Title of subject	Statistics for business in insurance			
2.	Code	MO505			
3.	Study programme	Management in insurance			
4.	Organizer of the study programme (university unit i.e., institute, chair, department)	Faculty of Economics - Skopje Ss. Cyril and Methodius University in Skopje			
5.	Level (first, second, third cycle)	Second cycle			
6.	Academic year / semester	2022/2023 1 st semester (winter)	7.	Number of ECTS credits	6
8.	Professor	Prof. Kalina Trenevaska-Blagoeva, PhD			
9.	Preconditions for enrolment	Completed first cycle of studies with obtained minimum of 240 credits.			
10.	Course Objectives (Competencies): Students should acquire knowledge and skills for employing a statistical analysis in the insurance companies.				
11.	<p>Course contents:</p> <ol style="list-style-type: none"> 1. Introduction 2. Statistical basis <ol style="list-style-type: none"> 2.1. Discontinuous (discrete) random variable 2.2. Discontinuous distribution patterns (discrete distributions) <ol style="list-style-type: none"> 2.2.1. Binomial distribution 2.2.2. Poisson distribution 2.3. A continuous (continuous) random variable 2.4. Continuous distribution models (continuous distributions) <ol style="list-style-type: none"> 2.4.1. Normal distribution 2.4.2. Population and samples 2.4.3. Sample size and accuracy 2.4.4. Central Limit Theorem 2.5. Claims assessment <ol style="list-style-type: none"> 2.5.1. Maximum likelihood estimation 2.5.2. Bayesian estimation 2.6. Testing the suitability (approximation) of the model the distribution 3. Distributions of claims <ol style="list-style-type: none"> 3.1. Exponential distribution 3.2. Pareto distribution 				
12.	Learning methods: interactive lectures with presentations, problem solving exercises, team projects, individual tasks, and home learning.				
13.	Total hours	6 ECTS x 30 classes = 180 hours			
14.	Distribution of the time at disposal	24+16+40+10+90=180 hours			
15.	Types of teaching activities	15.1.	Lectures	24 hours	
		15.2.	Tutorials (laboratory, auditory), seminars, teamwork	16 hours	
16.	Other types of activities	16.1.	Project assignments	40 hours	
		16.2.	Individual assignments	10 hours	
		16.3.	Self-study	90 hours	
17.	Assessment methods: combination of tests, individual and group assessments				60+30+10 = 100 points
	17.1.	Tests			60 points
	17.2.	Project assignments			30 points
	17.3.	Attendance and class participations			10 points

18.	Grading scale	up to 60 points			5 (five) (F)	
		from 61 to 68 points			6 (six) (E)	
		from 69 to 76 points			7 (seven) (D)	
		from 77 to 84 points			8 (eight) (C)	
		from 85 to 92 points			9 (nine) (B)	
		from 93 to 100 points			10 (ten) (A)	
19.	Preconditions for taking the final exam	Realized activities from items 15 and 16				
20.	Language	Macedonian				
21.	Evaluation method	Student questionnaire and other methods for continual selfevaluation.				
22.	Literature					
	22.1.	Mandatory literature				
		No.	Author	Title	Publisher	Year
		1.	Slave Risteski and Dragan Tevdovski	<i>Statistics for business and economics, 4th edition</i>	Faculty of Economics - Skopje	2010
		2.	Paul Newbold, William Carlson and Betty Thorne	<i>Statistics for Business and Economics</i>	Magor, Skopje	2010
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.	Murray R. Spiegel	<i>Statistics, 2ed</i>	McGraw Hill, London	1990
		2.	Prem S. Mann	<i>Statistics for business and economics</i>	John Wiley and Sons Inc., New York	1995
	3.	Mileva Žižić; Miodrag Lovrić; Dubravka Pavličić	<i>Metodi statističke analize</i>	Ekonomski fakultet, Beograd	1992	