Annex No. 3		**First Cycle Studies Course Programme**		
1.	Course Title	**Quantitative Methods in Finance**		
2.	Code	MST 420		
3.	Study programme			
4.	Organizer of the study programme (university unit i.e. institute, chair, department)	Ss. Cyril and Methodius University in Skopje Faculty of Economics - Skopje Chair of Mathematics and Statistics		
5.	Level (first, second, third cycle)	First cycle		
6.	Academic year / semester	2022-2023 7th (Summer semester)	7.	Number of ECTS credits	7.5
8.	Professor	Prof. Dragan Tevdovski, PhD		
9.	Preconditions for enrolment	None		
10.	**Course Objectives (Competencies):**			
	The aim of the course is to enable students to use statistical and quantitative methods and to solve financial problems with the help of modern program packages. Microsoft Excel, EViews and MATLAB are used. The use of statistical and quantitative methods is becoming increasingly important in financial and economic analysis. Quantitative data analysis is often used as a guide in forecasting and in making investment decisions. It is therefore of particular importance that students gain critical knowledge of basic statistical and quantitative methods in finance. The acquired knowledge in the subject will provide an advantage to students who want to be employed in the financial sector and will be an excellent basis for conducting postgraduate and doctoral research.			
11.	Course content:			
	1. Financial arithmetic and valuation of stocks and bonds 2. Statistical concepts and securities returns 3. Probability concepts and common probability distributions 4. Statistical inference 5. Correlation and regression analysis 6. Portfolio optimization 7. Multifactor models			
12.	Learning methods: interactive lectures with presentations, problem solving exercises, team projects, individual tasks, and home learning.			
13.	Total hours	7.5 ECTS x 30 classes = 225 classes		
14.	Allocation of hours per activity	60+30+30+15+90= 225 classes		
15.	Types of teaching activates	15.1.	Lectures	60 classes
		15.2.	Exercises (Seminars)	30 classes
16.	Other types of activities	16.1.	Written projects	30 classes
		16.2.	Individual tasks	15 classes
		16.3	Home studying	90 classes
17.		Grading method: 60+30+10=100 points		
	17.1.	Written test		60%
	17.2.	Written projects (written an oral presentation)		30%
	17.3.	Attendance and class participations		10%
18.	Grading scale		less than 50 points	5 (five) (F)
			from 51 to 60 points	6 (six) (E)

			from 61 to 70 points	7 (seven) (D)
			from 71 to 80 points	8 (eight) (C)
			from 81 to 90 points	9 (nine) (B)
			from 91 to 100 points	10 (ten) (A)
19.	Preconditions for taking the final exam		Realized activities from points 15.1, 15.2, 16.1, 16.2, 16.3	
20.	Language		Macedonian (or English)	
21.	Evaluation method		Internal evaluation and survey	

22.		Literature				
	22.1.	Compulsory literature				
		No.	Author	Title	Publisher	Year
		1.	DeFusco, R. A., McLeavey D.W., Pinto J.E., and Runkle D. E.	Quantitative Investment Analysis	John Wiley & Sons Inc.	2007
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.	Brandimarte, P.	Numerical Methods in Finance and Economics: A MATLAB Based Introduction	Wiley-Interscience	2006
		2.	Strong, R.	Portfolio Construction, Management and Protection	Thomson South-Western	2006
		3.	Shepard, K.	Financial Econometrics MFE MATLAB Notes: Revision 2		2013
		4.	Боди, З., Кеин А., и Маркус А.	Инвестиции	Табернакул, Скопје (Книга преведена на Македонски јазик)	2010