Second Cycle Studies Subject Programme						
1.	Title of subject	**Mathematical Statistics**				
2.	Code	STM 512				
3.	Study programme	Statistical methods for business and economics				
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	First year / 1st semester (winter)	7.	Number of ECTS credits	6	
8.	Professor	Associate Prof. Igor Ivanovski, PhD				
9.	Preconditions for enrolment	Completed first cycle of studies with obtained minimum of 240 credits				
10.	Course Objectives (Competencies): After completing the course, students should be able to: 1. to use the theory of probability in solving problems in the field of economics and finance; 2. the use the statistical inference; 3. to use statistical hypotheses testing; 4. to use statistical models to build the interdependencies between economic and financial variables.					
11.	Course contents: 1. Probability 2. Random variable and probability distributions 3. Expectations 4. Special distributions 5. Statistical inference 6. Point estimation 7. Distributions of sample estimates 8. Confidence bound estimation 9. Hypotheses testing 10. Categorical data and nonparametric methods 11. Statistical models					
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.	Learning methods: interactive lectures with presentations, problem solving exercises, team projects, individual tasks, and home learning.	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 50+40 + 10 = 100 points					
	17.1.	Tests	50 points			
	17.2.	Project assignments	40 points			
	17.3.	Attendance and class participations	10 points			
18.	Grading scale	under 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 items 15 and 16			
20.	Language		Macedonian/ English			
21.	Evaluation method		Student questionnaire and other methods for continual selfevaluation			
22.	Literature					
	22.1.	Mandatory literature				
		No.	Author	Title	Publisher	Year
		1.	Janev, D.	*Mathematics for economists*	Faculty of Economics - Skopje	2007
		2.	Azzalini, A.	*Statistical Inference: based on the likelihood*	Chapman & Hall	1996
		3.	Casella, G. and Berger R.	*Statistical Inference*	Duxbury Press	2002
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
		1.	Young G.A. and R.L. Smith	*Essentials of Statistical Inference*	Addison-Wesley	2002
		2.	Moore, D.S. and G.P. McCabe	*Introduction to the Practice of Statistics*	W.H. Freeman	2005