1.	Subject	**FOUNDATION OF HEALTH STATISTICS**
2.	Code	MLD – 112
3.	Study program:	Three-year professional studies of medical laboratory diagnostics
4.	Conducted by	UKIM Medical Faculty – Skopje Department of Epidemiology and Biostatistics with Medical Informatics
5.	Degree of education (first or second cycle)	First cycle
6.	Academic year/semester	First/I	7.	Credits	2.5

8.	Professor	Head of the Department: Prof. d-r Vesna Velikj Stefanovska The lessons are held by the following members of the Department of Epidemiology and Biostatistics with Medical Informatics: Prof. d-r Biljana Taushanova Prof. D-r Vesna Velikj Stefanovska Prof. D-r Rozalinda Isjanovska Prof. D-r Beti Zafirova Ivanovska Prof. D-r Irina Pavlovska
9.	Prerequisite	None
10.	Goals	1. Gaining knowledge of the foundations of medical statistics, the terms, metric units 2. Gaining theoretical and practical knowledge for analyzing simple statistical series by using appropriate statistical methods and interpreting the results 3. Identifying and distinguishing between the methodological and statistical aspects of particular professional and scientific medical publications 4. Gaining theoretical and practical knowledge of the demographic and vital statistics and using the gained knowledge in practice

11. Content summary:

Theoretical lessons:
- Descriptive analysis (statistical analysis plan; methods of gathering, grouping and presenting data; using relative numbers; analysis of the structure of a statistical mass according to numerical characteristics; sample methods)
- Sorting frequencies and variability (assessing sample parameters; standard error of average and proportion)
- Hypothesis (t-test)
- Analysis of variance
- Pearson X2 test
- Regression analysis and linear correlation
- Correlation measures based on ranked data
- Non-parametric tests – dependent samples
- Analyzing the dynamics of occurrences
- Analyzing the survival time
- Demographic statistics
- Vital statistics

Practical lessons:

	• Relation, proportion, factors, indexes • Dynamic indexes • Modus and median • Assessing sample parameters • Student t-test • X2 test • Correlation • Assessing proportions of a whole statistical mass based on a sample • Linear trend of time series • Seasonal index • Practical use of demographic and vital statistic terms			
12.	Teaching methods: interactive theoretical lessons, practical lessons, seminars			
13.	Total classes:		75 Credits 2.5*30 lessons per credit =75 75-45 theoretical lessons, practical lessons and seminars= 30 lessons learning at home	
14.	Organization			
15.	Types of teaching activities		15.1	Lessons: theoretical classes	15
			15.2	Practical lessons Seminars	30
16.	Other types of activities		16.1	Practice	
			16.2	Self-supporting practice	
			16.3	Learning at home	30
17.	Knowledge assessment		Points		
	17.1	Test	Mid-term exams 18-30 points The mid term exams consist of 2 test It includes: • Exercises of selected parts (dynamic indexes, arithmetic mean, standard deviation and variance coefficient; modus and median; assessing sample parameters) • Exercises of selected parts (student t-test; x-2 test; correlation; linear trend of time series; seasonal index) Students can gain 9-15 points from 1 mid-term exam		
	17.2	Final exam	Oral part points 36-52		
	17.3	Paper/project (oral written presentation)	**Paper** points 0-3		
	17.3	Active participation	Min. – Max. Points Theoretical lessons 1 - 5 Practical lessons 5 - 10 Attendance to the theoretical lessons: 51-60% = 1 point 61-91%= 2 points 91-100% = 3 points		

			Practical lessons (24 groups of practical lessons with a duration of 3 hours)
18.	Grading criterion (points/grades)	Up to 59 points	5 (five) F
		From 60 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.	Requirements for obtaining a signature and attending the final examination	To obtain a signature, the student must gain minimum points from attending the theoretical and practical lessons. To attend the final exam, the student must first pass the mid-term exams or obtain 30% of the total points. In the exam session, the student must first pass the mid-term exams and then attend the final exam. The grade is formed according to the grading criterion and it is based on the sum of the points of all the activities, mid-term exams and final exam.	
20.	Language	Macedonian	
21.	Method of evaluating the quality of the lessons	Anonymous student evaluation of the subject, the professors and the collaborators who hold the lessons.	
22.	Literature		
	22.1	Mandatory literature	
		1.	Danilovski D., Orovchanec N., Vasilevska K., Taushanova B., Velikj Stefanovska V., Isjanovska R., Zafirova Ivanovska B., Pavlovska I., Medical Statistics and Informatics – three year professional studies., University Ss. Cyril and Methodius, Medical Faculty, Skopje, 2015
		2.	Danilovski D., Orovchanec N., Vasilevska K., Taushanova B., Velikj Stefanovska V., Isjanovska R., Zafirova Ivanovska B., Pavlovska I., Medical Statistics and Informatics – practicum for three year professional studies, Medical Faculty, 2017
		3.	Danilovski D., Orovchanec N., Vasilevska K., Taushanova B., Velikj Stefanovska V., Isjanovska R., Zafirova Ivanovska B., Pavlovska I.,Biostatistics, University Ss. Cyril and Methodius, Medical Faculty, Skopje, 2012
	22.2	Additional literature	