"Fan S. Noli" University
Faculty of Agriculture

Short Program of Course:	Academic Year: 2021 – 2022

ECONOMIC STATISTICS

"Bachelor" in "Agribusiness Management"
First Cycle Study Program (180 ECTS)

Type of activity	hours
Lectures:	44
Seminars:	11
Exercises:	
Laboratory:	
Fieldwork practice:	
Clinical practice:	
Sportive practice:	

Credits:	5
Discipline:	B

Total workload	5	x 25	=	125
Calss workload:				55
Individual wprkload:				70

Code:	AGR-A-05

Description of Course

1	ANALYSIS OF VARIANCE 1. Understanding the variation analysis 2. Basic assumptions for variation analysis 3. Simple factorial model of variation analysis 4. The procedure for implementing a simple factorial model of variation ANOVA. Comparison's procedure of averages couples
2	ANALYSIS OF VARIANCE 5. Two-factorial model of variation analysis 6. Procedure for two-factorial model of variation analysis 7. Some guidance on the modeling experiments application for the variation analysis 8. Completely random experimental scheme. Experimental scheme with random blocks 9. Variance analysis according to Latin square and greek -latin
3	REGRESSION AND CORRELATION ANALYSIS 1. Understanding the links between economic phenomena and regression &correlation 2. Their importance for the economic phenomena analysis 3. Types of connections between phenomena 4. Methods of ascertainment (finding) correlative links 5. Simple regression and correlation (between two variables "x" and "y") Relation's form study between two
4	REGRESSION AND CORRELATION ANALYSIS 8. Simple linear regression 9. Raising the problem 10. Implementation of M.K.V (SSM) for parameters evaluation 11. Co-deviance and covariance 12. Residue analysis
5	REGRESSION AND CORRELATION ANALYSIS 16. The linear correlation coefficient 17. Simple non-linear regression and correlation (lean line) Parabolic model 18. Hyperbolic model 19. Power and exponential models 20. Logistic model
6	REGRESSION AND CORRELATION ANALYSIS 23. Validity control of the regression through "t" criterion Validity control of the correlation coefficient Prognosis through regression models 24. Point prognosis, Interval prognosis 25. Multiple regression and correlation 26. Two factorial regression and correlation of linear form Two factorial regression and correlation of linear form

7	NON-PARAMETRIC TESTS 1. A general understanding of the non-parametric methods 2. Association coefficient General coefficient of links Some association tests 3. χ2 Test (Chi-square) more suitable and most likely to use 4. Other strength coefficients of association between quality variables 5. Some non-parametric methods for quantitative variables with asymmetric distribution (not normal) Sign test
8	NON-PARAMETRIC TESTS 1. Mann Whitney criterion for small choices, Mann & Whitney criterion for large choices, Mann Whitney criterion for comparing two medians of two different populations 2. Kruskal-Wallis's criterion Spearman. Coefficient Cupurov coefficient 3. Correlation and non-parametric tests more relevant factorial Seminars: Questions and exercises.
9	DYNAMIC ANALYSIS AND PROGNOSIS 1. The importance of dynamic analysis based on time series basis and its key moments. 2. Assessment of basic trend (trend) of the time series with simple statistical methods 3. Averaging method and methods of extending the intervals as trend detection methods Trend statistical inference 4. The link between indicators that are given in time series form
10	DYNAMIC ANALYSIS AND PROGNOSIS 5 Evaluation of the seasonal component. 6 Seasonal coefficients and some details of their calculation Details for disassemble of time series levels in its components Prognosis of economic phenomena. 7 Prognosis of seasonal phenomena without wobble. Prognosis with regression models. Prognosis of seasonal phenomena wobbles
11	DECISION MAKING ANALYSIS 1. Introduction in decision theory 2. The structure of the decision problem 3. Table of payment and settlement Decision Tree 4. Table of opportunistic losses Decision-making with probability Graphical sensitivity analysis Expected value of perfect information Decision-making without probability
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