



Department of Statistics and Econometrics

DISCIPLINES FOR POSITION NO. 22, PROFESSOR: Basic Statistics, Statistics

- 1.1. Central tendency measures for univariate data series.**
Definition, typology, positional averages examples. The case of binary variables.
- 1.2. Measures of variation**
Simple and synthetic measures of variation; measures of skewness
Measures of variation for bivariate data series; Analysis of variance – ANOVA
- 1.3. The statistical survey**
Definition, stages, basic concepts; sampling procedures; Checking representativity; estimation; calculation of the sample size; Normal distribution; Central limit theorem; calculation and interpretation of z values; point estimate and confidence interval of the mean for the binary variable.
- 1.4. Hypotheses testing**
Concepts, steps, calculation and interpretation. Testing the population mean and variance.
- 1.5. Correlation and regression analysis.**
Correlation analysis (parametric and non-parametric)
Simple linear regression analysis Defining simple regression model; assumptions; parameter estimation; Testing parameters; estimator and estimate; properties of estimators; significance testing parameters estimation intervals for the parameters; Validation of regression model; Analysis of variance – ANOVA; Correlation calculation and testing; Testing normality of errors; predicting variable explained: point and confidence interval; examples evidence the simple regression model.
- 1.6. Time series.**
Descriptive indicators for time series; Time series components; Trend analysis.
- 1.7. Index numbers**
Construction of elementary and aggregated index number. Weighting systems

References

1. Andrei, T., Statistică și econometrie, Ed. Economică, București, 2004
2. Țițan, E., Statistică. Teorie și aplicații în sectorul terțiar, Ed. METEOR PRESS, București, 2012, România
3. Voineagu, V., Țițan, E., Țerban, R., Ghiță, S., Todose, D., Boboc, C., Pele, D., Teorie și practică econometrică, Ed. METEOR PRESS, București, 2007