Course description:

Continuation lecture "Probability and Statistics". Compared with the first lecture has a much more practical nature. Part of a lecture panoramic assumes some familiarity with the basics of probability, therefore prerequisites as stated above.

Program:

1. Limit theorems - Chebyshev inequality, theorems local and integral theorems
   the law of large numbers.
2. Testing statistical hypotheses: the hypothesis of mean value, variance and index
   structure. Elements of the theory test - the power of the test, the test unloaded.
3. Nonparametric hypothesis: independent testing and compliance testing.
4. Point estimation and interval estimation. Parameter estimation of regression equations. compounds
   Bayesian estimation diagrams.
5. Correlation and regression analysis. Calculation of the correlation coefficient from the sample. Testing
   the correlation coefficient. Testing the coefficients of regression equations.
6. Analysis of variance. Testing the hypothesis of average values. Classification and single
   multifactorial.
7. Exponential distributions and their properties. Statistics and the resulting matrix of information.
8. Generalized linear models - the formulation and review of the common tasks.
9. Hypothesis testing using the difference function credibility.

Requirements: Mathematical analysis. Probability and statistics.