

Syllabus of the subject Statistics FM.KEF/117PE/10;

2019-2020

Syllabus of the subject: Statistics

1. Descriptive Statistics
2. Basic Concept of Probabilistic Distributions
3. Sampling Distribution. Create a Sample from a Given Distribution
4. Point Estimates, Estimation and Confidence Intervals
5. Tests of Hypothesis
6. Contingency Table: Test for Independence
7. Analysis of Variance Method, One-Way Analysis and Two-Way Analysis
8. Linear Regression Models
9. Multiple Regression Models
10. Modeling of stationary time series, ARIMA models, estimation of model parameters, selection of suitable model.
11. Modeling of trend and time series

**Recommended literature:**

Ramachandran, Tsokos: Mathematical Statistics with Applications. Elsevier, 2009

Damodar N.Gujarati: Basic Econometrics. McGraw-Hill International Edition, 2009

Additional literature for topic 9: chapter 8 , Vercellis, C.: Business Intelligence: Data Mining and Optimization for Decision Making. John Wiley&Sons., 2009

The literature is available on the web site: <https://flurry.dg.fmph.uniba.sk/bohdalova/>

login is only in Slovak language

prihlásenie (login):

Používateľské meno (User Name): statistika

Heslo (password): Statistika

Click on the text: Výučba (on the left side) and then click on the text Štatistika pre PhD študentov

You will find study literature on the website (books, ppt), you need to click on the link (blue text).

**Evaluation of the subject:**

*Project*

Each student prepares own data related to the dissertation topic, which he / she processes in IBM SPSS or MS Excel, SAS, or other statistical software, using min. 5 analyzes by syllabus.

The project will include:

1. Description of data
2. Data source
3. Proposed research questions to be answered using the data
4. Own data analysis - commented outputs from statistical software

5. Evaluation of research questions based on your statistical findings

6. Conclusion, discussion. Proposal of further possible analyzes.

Project processing: 45% of the evaluation

project presentation, using ppt: 15% of the evaluation.

*test online* 40% of the evaluation, Test will be sent via e-mail.