

COURSE TITLE: **BASICS OF DATA ANALYSIS FOR SOCIAL SCIENCES**

LECTURER: Daniel Dostál

MINIMAL NUMBER OF STUDENTS: 3 ECTS CREDITS: 3

ABOUT THE COURSE:

This course introduces students to the basics of statistical modelling. After attending this course, student will see various statistical procedures as special cases of the general linear model. This approach enables more focused insight into the principles and assumptions of statistical hypothesis testing and parameter estimation with easier to grasp and more natural way for humanities and social sciences students.

The course assumes basic knowledge of descriptive statistics (e.g. mean and standard deviation) and statistical inference (the logic of the null hypotheses testing with p-values).

The course will cover the following topics:

- Statistical models
- Simple regression analysis and the regression curve
- Parameter estimates, the least squares method
- Determining model quality
- Qualitative independent variables, general linear model
- Interactions
- Curvilinear dependencies
- Null hypothesis tests
- Stepwise and hierarchical regression
- Competences acquired

The course provides students with one versatile tool for dealing with quantitative problems in social science research. After finishing this course students will be able to abandon usage of the most bivariate tests and replace them with more complex regression models.

REQUIREMENTS ON STUDENTS:

- *Attendance at practical lessons*
- *Successfully completing assignments*