Data Analysis 1 for Public Policy and Economics

Institution:	Department of Public Policy, Central European University PU
Course instructor:	Daniel Weitzel, Róbert Pál Lieli
Year/Term:	Year 1
Course type:	Core course
ECTS:	**4**

Background and overall aim: The course is designed to teach students the basic concepts of statistics needed for any type of data analysis. This includes various ways of describing and presenting data, working with empirical and theoretical distributions, understanding the concept of a sampling distribution, estimation, and hypothesis testing. Finally, the course serves as an introduction to the statistical software STATA, or the programming language R, used for data manipulation and analysis in practice.

We are in the midst of a data revolution. The familiarity with various statistical methods and the ability to deal with data has become a critical skill not only in academic research but also in a host of other carrier paths, including policy analysis and many private sector positions.

Learning outcomes:

By the end of the course, students will be able to:

- use descriptive statistics to summarize data sets;
- understand the probabilistic foundations of statistics (random variables and their distributions, independence);
- apply and understand methods used for statistical inference (confidence intervals, hypothesis testing, p-values);

use Stata or R to perform data management and analysis tasks.