**Course descriptor**

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| Title of the course | Data Analysis in Sociology (offered in English) |
| Title of the Academic Programme  | Sociology and Social Informatics |
| Type of the course | core |
| Prerequisites | Students are expected to have taken some sort of basic/introductory statistics course for social science research or to have at least some experiences and knowledge about basic social statistics, such as probability and hypothesis testing, while they will revisit those during the course. |
| ECTS workload | 4 |
| Total indicative study hours | Directed Study | Self-directed study  | Total |
| 64 | 88 | 152 |
| Course Overview | The course aims at beginners and serves to develop skills necessary to solve typical problems in analyzing social data in R software environment. The course goes from introductory topics (variable types, hypothesis testing, descriptive statistics) to some statistics and methods (chi-square, t-test, nonparametric statistics, one-way ANOVA, and linear regression). |
| Intended Learning Outcomes (ILO) | The discipline aims at developing data analysis skills and analytics in R. The major goal of the course is to train students in basic methods of data analysis as applied to the social sciences, which includes reading and interpreting published results, as well as reporting their own analyses.As a result of this course, students will be able to import and pre-process the data for analysis, produce popular types of analysis examining relationships between variables, means comparison, and linear regression. They will also learn how to visualize results and compose reports in R Markdown. |
| Indicative Course Content | 1. Descriptive statistics.2. Means comparison and analysis of association.3. Introduction to linear regression. |
| Teaching and Learning Methods | This course involves lectures, seminars, and computer labs. Students prepare regular home projects in small groups. |
| Indicative Assessment Methods and Strategy | Students work in small groups throughout the course to build up their methods portfolio which they submit in written and then present in class. The course involved one revision paper-and-pencil test. The exam consists of solving problems similar to home projects. |
| Readings / Indicative Learning Resources | Mandatory Field, Andy (2016). An Adventure in Statistics: The Reality Enigma, Sage.Optional Crawley, M. (2014). Statistics: An Introduction Using R, Second Edition. John Wiley & Sons.Diez, David M., Barr, Christopher D. and M. Çetinkaya-Rundel (2015). OpenIntro Statistics. OpenIntro, Inc.; 3rd ed.Stowell, Sarah (2014). Using R for Statistics. Apress. |
| Course Instructor | Anna Shirokanova |