Course title
C03. Introduction to Stata

2. Instructor details
First name, last name: **David Johann**
Department/Unit: Department of Methods in the Social Sciences (MeSoS)
Institution: University of Vienna
Full postal address for ECPR correspondence:
Department of Methods in the Social Sciences
University of Vienna
Rathausstraße 19/1/9
A-1010 Vienna
Phone: +43-1-4277-49910
Fax: +43-1-4277-9499
E-mail: david.johann@univie.ac.at

First name, last name: **Kathrin Thomas**
Department/Unit: Department of Methods in the Social Sciences (MeSoS)
Institution: University of Vienna
Full postal address for ECPR correspondence:
Department of Methods in the Social Sciences
University of Vienna
Rathausstraße 19/1/9
A-1010 Vienna
Phone: +43-1-4277-49917
Fax: +43-1-4277-9499
E-mail: kathrin.thomas@univie.ac.at

**Short Bios**
David Johann, sociologist, is post-doctoral research associate in the project team of the Austrian National Election Study (AUTNES). His substantive research focuses on electoral behaviour and public opinion. As part of AUTNES he is examining political sophistication and its impact on political participation and judgments about parties.

Kathrin Thomas is a postdoctoral fellow with the demand side of the AUTNES. Kathrin’s research background is quantitative comparative politics. She is especially interested in the impact of contextual effects on political behavior, the influence of personality on political decisions as well as general political support.

**Prerequisite knowledge**
- Basic statistical knowledge (e.g. descriptive, bivariate and multivariate analysis) is assumed.
- No previous knowledge of Stata is required, knowledge of SPSS is desirable, but not a prerequisite.
- Please note that this is not a course that gives a detailed insight into statistical procedures, but introduces how to use standard statistical procedures in Stata. It offers some tips and tricks to improve code writing (e.g. simple loop commands).
Short course outline
The course is conceptualised as an add-on to content-based courses. The aim is to introduce how Stata works and how it can be used to conduct descriptive, bivariate and multivariate analysis, but the course does NOT give a detailed insight into statistical techniques or modelling. After attending this course, students will be able to apply their statistical skills in Stata. Students will be able to use the tab menu as well as commands and to conduct data analysis in Stata. In addition, they will be able to read and to convert Stata output into a presentable format.

Long course outline
This course is best suited for students who have no experience with Stata, but who bring in basic statistical skills, e.g. some knowledge of descriptive, bivariate and multivariate statistics, or who have previous knowledge in the use of other statistical software such as SPSS or SAS. The aim is to give an idea of how Stata can be best used to conduct statistical analysis. This includes a brief introduction to the various windows in the software programme and the use of the tab menu. Stata strongly relies on the command line interface. Thus, the course also gives an insight to general construction of Stata code (syntax). The instructors also try to help students to write clear and parsimonious Stata commands and to improve do-files and do-file documentation. Essentially, students learn to use do-files as a simple lab-book, where annotations and ideas can be recorded in addition to the raw code and in order to facilitate replicable analysis.

In detail, we will start off by introducing the software package Stata. What is it? How does the Stata interface look like? How does it work? We achieve this by giving an applied overview of the various screens and windows. We then focus on the data management side. It is shown how to import and export various data files and types, how to generate and recode data and how to keep log-files. Similar to SPSS, Stata provides tabs that can be used to analyse the data as well as a syntax window. We introduce both in this course and try to link the tab menu procedures to the written code. Finally, the course introduces ways how to convert Stata output into a presentable format for publication. This is done for tables as well as for graphics. Students can take home all files and example code and should be able to apply the statistical procedures using their own data in Stata afterwards.

In detail, the lectures comprise:
- Stata screen and data management
  - menu and windows
  - generating and importing data
- Data manipulation
  - Describing data using simple graphs e.g. histograms, box plots, pie charts, scatter plots etc.
  - Bivariate statistics and statistical tests, e.g. cross tables, correlations, t-test, chi-square test
  - Multivariate statistics, e.g. linear regression and regression analysis for categorical data

Day-to-day schedule (Friday 14 to Saturday 15 February)

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<th>Details</th>
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<tbody>
<tr>
<td><strong>Day 1</strong></td>
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<tr>
<td>Getting started with Stata; Importing/exporting data files; Using the tab menu for analysis; Taking log files; Introduction to writing Do-Files (basic construction of Stata commands) Stats: generating and recoding variables, simple descriptive statistics; Bivariate analysis</td>
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<td><strong>Day 2</strong></td>
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<td>Writing parsimonious code; Introduction to Stata graphics; converting Stata output into a presentable format [loop commands] Stats: Multivariate analysis and graphics</td>
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Day-to-day reading list

<table>
<thead>
<tr>
<th>Day</th>
<th>Readings (please list at least the compulsory reading for the scheduled day)</th>
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<tbody>
<tr>
<td>Day 1</td>
<td>TBA</td>
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<tr>
<td>Day 2</td>
<td>TBA</td>
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Software and hardware requirements

STATA (at least version 11)

**Literature**

**Lab requirement**
- Computer lab