

GENERAL DESCRIPTION

This course aims to provide participants with the fundamental Stata programming toolkit in order to facilitate, automate, replicate and personalize both data analysis, management and presentation. The course begins by reviewing some general Stata commands, illustrating how they can be combined with some powerful Stata programming constructs for looping and branching. During the two days, participants will be shown how to write, modify and develop do files (Stata programs).

At the end of the program, it is expected that participants are able to personalize existing Stata commands and develop their own do files in order to organize their workload in a more automated, efficient, flexible and reproducible manner. Enabling them, for example, to ultimately be in a position to automate the more repetitive tasks of data management, data analysis and data presentation in Stata.

In common with TStat's course philosophy, each individual session is composed of both a theoretical component (in which the techniques are explained), and an applied (hands-on) segment, during which participants have the opportunity to implement the techniques using real data under the watchful eye of the course tutor. Throughout the course, theoretical sessions are reinforced by case study examples, in which the course tutor discusses and highlights potential pitfalls and the advantages of individual programming techniques.

TARGET AUDIENCE

Researchers or professionals with previous programming skills in other software wishing to work effectively in Stata.

Existing Stata users wishing to acquire the "standard" Stata programming toolkit in order to implement basic programming techniques to effectively automate a substantial part of their empirical data analysis.

COURSE REQUISITES

It is expected that individuals wishing to follow this course have a familiarity/working knowledge of Stata. Participants are not however, required to have any programming experience in Stata or in other statistical packages.

PROGRAM

SESSION 1: FUNDAMENTAL CONCEPTS/COMMANDS FOR STATA PROGRAMMING: A QUICK REVIEW

1. Developing effective DO-files in Stata
2. Tracking your workflow
 - DO-files, LOG-files and labelling
3. Managing directories and folders:
 - **pwd, mkdir, cd, dir, copy, erase, type**
4. The Stata command syntax
5. Reading data into Stata
 - **Import and exporting data from Excel and delimited .txt files**
6. Variable and data types
 - **numeric, string and missing data**
7. Data examination
 - Sub-setting the data using the if and in qualifiers
 - Stata's exploratory data analysis commands - **browse, edit, assert, describe, codebook, summarize, tabulate, inspect, graph**
8. Creating and manipulating variables
 - **generate, egen, replace, rename, recode and replace**
9. Converting strings to numerics and vice versa
 - **tostring, destring, encode**
10. Codifying missing values
 - **mvdecode and mvencode**
11. Generate dummy variables, lags and leads
12. Working with dates in Stata

SESSION 2: ORGANISING, MANIPULATING AND VISUALIZING YOUR DATASETS WITHIN A DO-FILE

1. Saving the dataset
 - **save, preserve, restore**
2. Advanced data management commands
 - **keep and drop**
 - **sort and gsort**

- **by**-processing
- **append**
- **merge** and **joinby**
- **collapse** and **contract**
- **order**, **aorder**, **move**, **reshape** (for panel data)

estimation output

- Returning estimation (**return**, **ereturn**)
- Building, modifying and automating graphs
 - Stata graphic capabilities
 - The syntax of the graph command
 - Customizing graphs

SESSION 3: STATA CONSTRUCTS FOR DO-FILES PROGRAMMING

1. Stata **syntax**
2. Global and local macros
 - Global macros
 - Local macros
 - Recalling macros
3. Scalars and matrices
4. Extended macro functions
5. Macro increment and decrement functions
6. Advanced local macro manipulation
7. Temporary objects
 - Temporary variables: **tempvar**
 - Temporary Matrices and vectors: **tempname**
 - Temporary Files: **tempfile**
8. Looping in Stata
 - Looping using **foreach**
 - Looping using **forvalues**
 - Looping using **while**
9. Branching in Stata with: **if** and **else**
10. Writing and modifying a Stata program
 - Programs *without arguments*
 - Programs with *positional arguments*
 - Programs with *named positional arguments*
 - Storing and retrieving program results
11. Programs with arguments using the **syntax** construct

SESSION 4: AUTOMATION DO-FILE PROGRAMMING IN PRACTICE - MAKING LIFE EASIER!

1. A DO-file template
2. Master and Using DO-files
3. Speeding-up your workflow within a DO-file: real examples
 - Running estimations under alternative model specifications
 - Building, modifying and automating tables of

USEFUL TEXTS

- An Introduction to Stata Programming, Christopher F. Baum, Second Edition, StataPress 2016

LOCATION AND DATE

The course will be held in Frankfurt am Main at Fleming's Deluxe Hotel Frankfurt-City, Eschenheimer Tor 2 the 28th-29th September 2017.

REGISTRATION FEES

- Students*: € 526.00
- Academic: € 781.00
- Government / Nonprofit: € 986.00
- Commercial: € 1095.00

*To be eligible for student prices, participants must provide proof of their full-time student status for the current academic year.

All fees are subject to VAT (applied at the current Italian rate of 22%).

The number of participants is limited to 8. Places, will be allocated on a first come, first serve basis. The course will be officially confirmed, when at least 5 individuals are enrolled.

Course fees cover: course materials (handouts, Stata do files and datasets to used during the course), a temporary licence of Stata valid for 30 days from the beginning of the course, lunch and coffee breaks.

In order to maximize the usefulness of this course, we recommend that participants bring their own laptops with them, to be able to actively participate in the empirical sessions.

Individuals interested in attending the training course, must return their completed registration forms to TStat by the 12th of September 2017.

Further details regarding our registration procedures, including our commercial terms and conditions, can be found at www.tstattraining.eu/training/d-in16.

CONTACT INFORMATION:

Monica Gianni

Via Rettangolo, 12-14 | 67039 Sulmona (AQ)
Tel. +39 0864 210101 | Fax +39 0864 206014
training@tstat.eu | www.tstattraining.eu

