

Statistical Computing (2016/17)

Content

This course is composed of two parts:

- **STATA**: practical implementation of micro-econometric methods
- **MATLAB**: practical implementation of time-series econometric methods

Attendance

Not compulsory, but strongly recommended. Active class participation is very much appreciated.

Final Exam

To pass Statistical Computing, students need a PASS in each part. A PASS in a single part will be kept on hold for the academic year only. There is one exam per session. See each section for specific rules and grading.

STATA module

Stefano Gagliarducci

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Office hours:

during the course: 2 hours after each class
outside the course: by appointment

The aim of this course is to acquaint students with the basics of Stata, and its use for applied economics. The course will be mostly focused on micro-econometrics. Topics to be covered in the first part (Gagliarducci) include: dataset management, descriptive statistics, graphics, loops, linear regression, instrumental variable models (IV), panel data models, non-linear models, regression discontinuity (RD).

Course prerequisites and material

Students are supposed to be attending, or have attended, the course of Statistics and Econometrics. In each class we will compile a Stata dofile on the scheduled topic (see below).

Final exam

PASS or FAIL. The final exam consists of a take-home assignment to be returned (via email) at least one week before the expected exam registration.

Suggested Text and Readings

- Notes on microeconometrics review
- Stata documentation (any version)
- An Introduction to Modern Econometrics using Stata, C.F. Baum, 2006
- Statistics with Stata, by L.C. Hamilton, 2006
- Microeconometrics using Stata, by A.C. Cameron and P.K. Trivedi, 2009
- Mastering Metrics, by J. Angrist and S. Pischke, 2015
- An Introduction to Stata Programming, Christopher F. Baum, 2014

All readings are available through the *Biblioteca Vilfredo Pareto*, located in the building B (<http://economia.biblio.uniroma2.it/>).

Additional material available at:

- <http://www.stata.com/help.cgi?contents>
- <http://www.ats.ucla.edu/stat/stata/>
- http://dss.princeton.edu/online_help/stats_packages/stata/
- <http://web.missouri.edu/~kolenikovs/stata/Duke/commands.html>
- <http://www.mostlyharmlesseconometrics.com/blog/>

Course Web Page

All the material for this class (syllabus, do files, announcements) will be posted on the course webpage.

Data is available at:

<http://www.bancaditalia.it/statistiche/indcamp/bilfait/dismicro/annuale/stata>

MATLAB module

Antonio Parisi

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Office hours:

Thursday 14:00 - 16:00

Econometric methods will be applied using real-world datasets for both univariate and multivariate time series. The course will cover different models (ARMA, VAR, EC models) and related statistical tests. Students should be able to implement the methods and interpret the results.

Final exam

PASS or FAIL. The final exam consists of a take-home assignment to be returned (via email) at least one week before the expected exam registration.

Suggested Text and Readings

Cho, Martinez (2014). Statistics in MATLAB: A Primer. Chapman and Hall/CRC

Course Web Page

The material for this class (syllabus, scripts, data, announcements) will be posted on the course website <http://economia.uniroma2.it/master-science/economics/corso/426/>