

Course information

Course website: <http://www.ernestoamaral.com/stata2020a.html>

Meeting location: Academic Building (ACAD) (<http://aggiemap.tamu.edu/?bldg=0462>)

Meeting times:

- February 20, 2020 (Thursday), 4:00–6:00pm, ACAD 308
- February 21, 2020 (Friday), 2:00–4:00pm, ACAD 211
- February 27, 2020 (Thursday), 4:00–6:00pm, ACAD 308
- February 28, 2020 (Friday), 2:00–4:00pm, ACAD 211
- March 5, 2020 (Thursday), 4:00–6:00pm, ACAD 308
- March 6, 2020 (Friday), 2:00–4:00pm, ACAD 326

Instructor information

Ernesto F. L. Amaral, Assistant Professor, Department of Sociology

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Course description

This course is an introduction to social statistics. We will use the statistical software Stata to analyze data from the American Community Survey (ACS). We will cover several topics on social statistics:

1. Univariate analysis, including mode, median, mean, and boxplot.
2. Bivariate analysis, including:
 - 2.1. Measure of association for nominal-level variables (Chi Square).
 - 2.2. Measure of association for ordinal-level variables (Spearman's Rho).
 - 2.3. Measures of association for interval-ratio-level variables (scatterplots, Pearson's r , analysis of variance – ANOVA).
3. Multivariate analysis (ordinary least square regression).

Lectures, Stata codes, and other materials are available in the course website. The professor will demonstrate how to download ACS data directly from the Integrated Public Use Microdata Series (IPUMS) portal. However, the database is also available for download directly in the course website (more information below).

No registration is needed. Undergraduate students, graduate students, and faculty are welcome. Please bring your laptops to the course. It is more efficient if you have Stata installed in your computer. Using Stata through the Virtual Open Access Lab (VOAL) at Texas A&M University can be problematic for this short course. Students can request short-term license (free for a maximum of one week) or purchase single-user license with lower prices directly in the Stata website. Links to VOAL, short-term license, and single-user license are provided below.

American Community Survey (ACS)

ACS official website

<https://www.census.gov/programs-surveys/acs/>

ACS Public Use Microdata Sample (PUMS)

<https://www.census.gov/programs-surveys/acs/data/pums.html>

American FactFinder

<http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>

Explore U.S. Census Bureau Data

<https://data.census.gov/cedsci/>

Integrated Public Use Microdata Series (IPUMS)

Minnesota Population Center (MPC)

University of Minnesota

<https://www.ipums.org/>

ACS resources for this course

<http://www.ernestoamaral.com/docs/Stata2020a/course.zip>

Uncompress the course.zip file in your computer. This procedure varies across computers. Basically, it will create a folder called “course” with four sub-folders: data, docs, output, progs. These folders will contain the following material:

data	American Community Survey microdata.
documents	Questionnaires and other documents.
programs	This folder will be empty. You will save Stata do-files and log-files throughout the course.
output	This folder will be empty. You will save tables and figures throughout the course.

Save the “course” folder in a specific location in your computer, following these suggestions for Windows and Macintosh:

– Windows

Save the uncompressed “course” folder under the C:\ drive.

You can see the C:\ drive under “Computer” or “My PC” in Windows Explorer.

– Macintosh

Save the uncompressed “course” folder under Macintosh HD (Hard Drive).

To show Macintosh HD on your Finder sidebar, open Finder, click on “Finder” menu, click on “Preferences...”, click on the “Sidebar” tab, and select “Hard disks.”

Stata licenses

Instructions for Accessing Stata Through the Virtual Open Access Lab (VOAL)

Texas A&M University

http://www.ernestoamaral.com/docs/Stata2020a/Stata_VOAL_instructions.pdf

Student Short-Term Stata License (free for a maximum of one week)

<https://www.stata.com/customer-service/short-term-license>

Student Single-User Stata License (lower prices)

<https://www.stata.com/order/new/edu/gradplans/student-pricing>

Stata help resources

Stata: Data Analysis and Statistical Software

<http://www.stata.com/links>

Institute for Digital Research and Education (IDRE)

University of California, Los Angeles (UCLA)

<https://stats.idre.ucla.edu/stata>

Carolina Population Center (CPC)

The University of North Carolina at Chapel Hill (UNC)

http://www.cpc.unc.edu/research/tools/data_analysis/statatutorial

Generalized Linear Latent And Mixed Models (GLLAMM)

Stata Programs for estimating, predicting, simulating

<http://www.gllamm.org>

Stata extra modules

<http://www.ernestoamaral.com/docs/Stata2020a/Modules.zip>

Main Stata Windows

Review: commands that were typed since the software was open. It is possible to copy these commands to the do-file editor window with a right click.

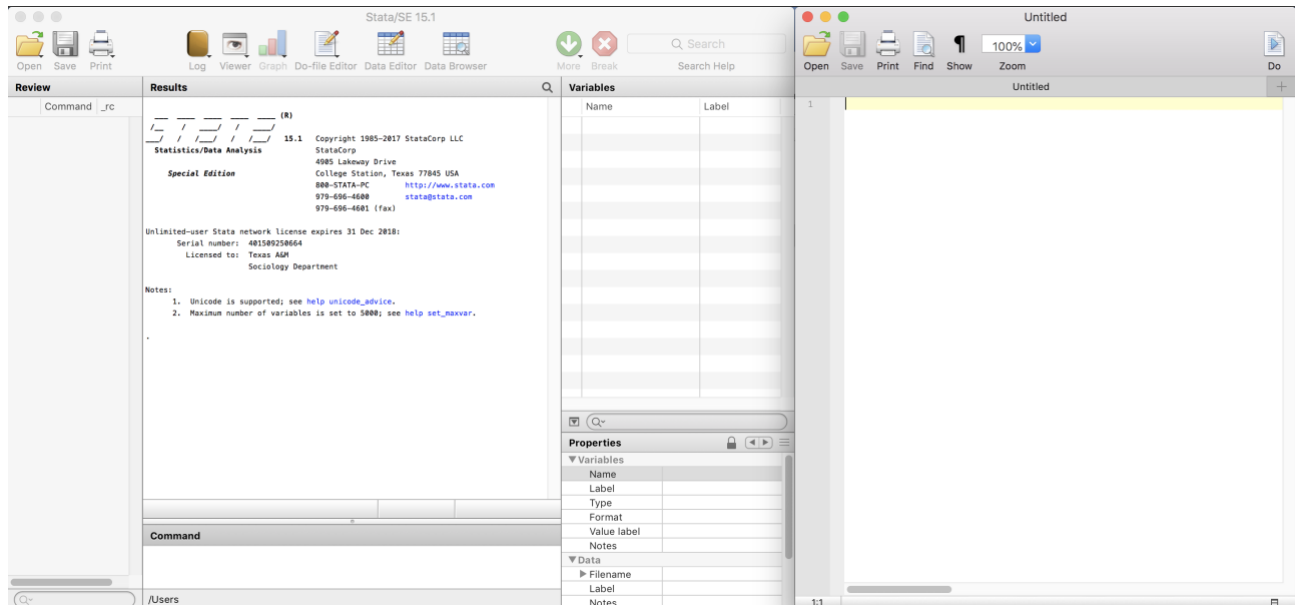
Results: results of analysis (log window).

Variables: list of database variables.

Command: quick way to write commands.

Properties: details of variables.

Do-file Editor: write commands.



References

1. Healey, Joseph F. 2015. **Statistics: A Tool for Social Research**. Stamford: Cengage Learning. 10th edition.
([MSC Bookstore](#))
([Amazon](#))
2. Agresti, Alan; Finlay, Barbara. 1999. **Statistical Methods for the Social Sciences**. Upper Saddle River: Prentice Hall. 3rd edition.
3. Illowsky, Barbara; Dean, Susan. 2018. **Introductory Statistics**. Houston: OpenStax.
(<https://openstax.org/details/books/introductory-statistics>)

This is an open access textbook, so it is free for downloading.
4. Hamilton, Lawrence C. 1992. **Regression with Graphics: A Second Course in Applied Statistics**. Belmont: Duxbury Press.
5. Wonnacott, Thomas H.; Wonnacott, Ronald J. 1986. **Regression: A Second Course in Statistics**. Malabar: Krieger Publishing Company.
6. Long, J. Scott; Freese, Jeremy. 2014. **Regression Models for Categorical Dependent Variables Using Stata**. College Station: Stata Press. 3rd edition.
7. Miller, Jane E. 2015. **The Chicago Guide to Writing About Numbers**. Chicago: The University of Chicago Press. 2nd edition.
([MSC Bookstore](#))
([Amazon](#))

I use this manual for writing about numbers to give examples of how to organize, present, and interpret numbers. There are also several online resources to learn about this topic in the Sociology field, such as:

– Formatting in Sociology (American Sociological Association – ASA Style)
(<https://owl.english.purdue.edu/owl/resource/583/1/>)

– Writing with Statistics
(<https://owl.english.purdue.edu/owl/resource/672/1/>)