

# Introduction to Stata

Lecturer: Michele Slocovich

## Language

English

## Course Description and Objectives

Stata is a statistical software package widely adopted in a scholar and research environment. The aim of this introductory course is to make participants confident with the basic Stata usage for analyzing business and economic data, since in many courses basic Stata topics will be taken for granted. The course is designed for students who have little or no experience with Stata and intend to develop the knowledge of this useful software for business and economics data analysis

An overview of the main Stata functions will be provided as well as the application of these functions with real examples.

The course has two main objectives:

- To demonstrate the potentialities of the software for analyzing data by making use of different examples
- To enable students to carry out basic statistical analyses on their own

Upon successful completion of this course, the student will be enabled to:

- Produce descriptive analyses by means of simple statistical tables, measures and graphs
- Estimate a linear regression model
- Basic usage of STATA programming

Every session will intermix the presentation of syllabus topics followed by examples and in class exercises.

**Important notice:** The course presents the software Stata with its main features; therefore, it does not represent whatsoever a substitute of a formal statistics course. Details of any statistics methodology used *will not be presented*.

## Audience

The course is open to all Bocconi students. In particular:

- Those who will be involved in projects requiring the analysis of a dataset
- Students who will need Stata to prepare their final thesis work

## Prerequisites

To feel comfortable in this course, students should be familiar with basic statistical concepts (i.e. frequency distribution, average, standard deviation, probability, bivariate descriptive statistics ...) as taught in a first level statistical course (e.g. 30001 Statistics).

Basic computer knowledge is given as acquired (i.e. file manager use, basic knowledge of Excel ...) – having attended 30424 CS would be ideal.

## Duration

16 hours

## Teaching mode

This course will be only taught in person. Distance mode will not be provided.

## Calendar

Lecture	Date	Time	Room
1	Mon 07/11/2022	18.15 – 19.45	InfoU01
2	Thu 10/11/2022	18.15 – 19.45	InfoU01
3	Mon 14/11/2022	18.15 – 19.45	InfoU01
4	Thu 17/11/2022	18.15 – 19.45	InfoU01
5	Mon 21/11/2022	18.15 – 19.45	InfoU01
6	Thu 24/11/2022	18.15 – 19.45	InfoU01
7	Mon 28/11/2022	18.15 – 19.45	InfoU01
8	Thu 01/12/2022	18.15 – 19.45	InfoU01

## Syllabus of the course

Lesson	Topics
1	<b>Introduction to Stata</b> <ul style="list-style-type: none"> <li>- Stata environment overview</li> <li>- Finding help: resources</li> <li>- Dataset basics: edit, browse, list</li> </ul>
2	<b>Data management and preparation</b> <ul style="list-style-type: none"> <li>- Stata commands syntax overview</li> <li>- Preparing data for analysis</li> <li>- Importing data from another software</li> </ul>
3	<b>Exploring Data</b> <ul style="list-style-type: none"> <li>- Managing data formats</li> <li>- Manipulating observations</li> <li>- Working with variables</li> </ul>
4	<b>Data manipulation - advanced</b> <ul style="list-style-type: none"> <li>- Replacing   Appending   Merging   Reshaping</li> <li>- Variable types</li> <li>- Weights</li> <li>- Graphics data representation</li> <li>- Using menu vs line commands</li> <li>- Saving, exporting, modifying graphs</li> </ul>
5	<b>Graphics &amp; Hypothesis testing</b> <ul style="list-style-type: none"> <li>- Graphics data representation</li> <li>- Using menu vs line commands</li> <li>- Saving, exporting, modifying graphs</li> <li>- Exploratory data analysis Basic descriptive uni- and bi-variate statistics</li> <li>- Main tools for hypothesis testing</li> <li>- Reading Stata hypothesis test output</li> </ul>
6	<b>Simple Linear Model</b> <ul style="list-style-type: none"> <li>- Simple and multiple OLS: regress command</li> <li>- Values prediction</li> <li>- Interactions</li> <li>- Diagnosing regression commands</li> </ul>
7	<b>Beyond simple regression</b> <ul style="list-style-type: none"> <li>- Useful Techniques</li> <li>- Overview of time series</li> <li>- Panel data: setup</li> </ul>

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**Lesson Topics**

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- 8 Programming with Stata**
- Panel data: regression
  - Programming with Stata
  - Self assessment
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**Suggested Bibliography**

Hamilton, L. C., *Statistics with STATA: Version 12, 8th Edition*, Cengage, 2012.

Bittmann, F., *STATA, a really short introduction*, De Gruyter Oldenbourg, 2019.

**Software**

Stata version 17 (14 to 16 are enough to attend: differences among these versions are not relevant to course contents)

**Available seats**

This activity is limited to **110 participants**. Registrations cannot be carried out once this number has been reached or after closing of the registration period.