Data analysis with SPSS

Lecturer: Maria Chiara Debernardi

Language

English

Course description and objectives

IBM SPSS Statistics (formerly SPSS: Statistical Package for the Social Sciences) is a software environment for data management and statistical analysis through an intuitive graphical interface, without requiring programming skills. The course covers the main steps of a typical statistical workflow: importing data, cleaning and pre-processing, running analyses, and presenting results.
The main objective is to provide participants with practical skills to use SPSS for socio-economic and business data analysis.

Upon successful completion of this course, the student will be able to:
- understand the key features of SPSS and use the graphical user interface (GUI) effectively
- produce descriptive analyses using summary tables, statistics, and graphs
- run and interpret common parametric tests and basic regression models
- conduct selected multivariate analyses commonly used in applied research
- identify reliable resources for advanced SPSS usage (documentation, help, tutorials)

Important notice: this course focuses on how to use SPSS and interpret its output. It is not intended to replace a formal course in Statistics; therefore, statistical theory will be addressed only at an introductory level.

Audience

The course is open to all Bocconi students, especially final-year Bachelor and MSc students who want to learn statistical data analysis without programming. The skills taught will be valuable for thesis works and professional applications.

Prerequisites

No prior coding experience or knowledge of SPSS is assumed.
It is advisable to have a good familiarity with PC operations and a working knowledge of some basic application software (e.g., Excel).
At least basic knowledge and understanding of Statistics is highly recommended.

Guidelines

Registration:

You can sign up for the course only through the yoU@B student Diary, in the "**Sign-up for various activities**" box (please note that the box appears only when registrations open. Before then it will not be visible).

You may only cancel your registration by Diary **no later** than the registration deadline for the course itself. No other methods of cancellation are allowed.

Registration will be confirmed a few days before the start of the course through a message posted in the yoU@B student Diary.

Attendance:

- Attendance of **75% or more** of the lessons: obtainment of the **Open Badge**
- Attendance of **less than 25%** of the lessons: placement on **Exclusion List**

Duration

16 academic hours

Teaching mode

This course is taught **in person** only. Online mode will not be provided.

Calendar

Lecture	Date	Time	Room
1	Mon 30/03/2026	18.15 - 19.45	InfoAS04
2	Tue 31/03/2026	18.15 - 19.45	InfoAS04
3	Mon 13/04/2026	18.15 - 19.45	InfoAS04
4	Tue 14/04/2026	18.15 - 19.45	InfoAS04
5	Mon 20/04/2026	18.15 - 19.45	InfoAS04

6	Tue 21/04/2026	18.15 - 19.45	InfoAS04
7	Mon 27/04/2026	18.15 - 19.45	InfoAS04
8	Tue 28/04/2026	18.15 - 19.45	InfoAS04

Syllabus of the course

Lecture	Topics

1 Introduction
- SPSS overview
- Data analysis: workflow and critical issues
- SPSS GUI: windows, menus, commands
- File management: SPSS native formats

Exercises

2 Preliminary data analysis
- Exploratory commands:
  o Frequencies
  o Descriptives
  o Explore
  o Crosstabs
- Split file and select cases

Exercises

3 Graphical data analysis
- Creating charts with SPSS: chart builder vs legacy dialogs
- Exporting charts
- Histograms
- Bars
- Boxplots
- Scatter plots

Exercises

4 Data pre-processing
- Creating new variables
- Recoding
- Labelling variables and their values
- Missing values
- Outliers

Exercises

Lecture	Topics
5	**Regression and ANOVA**
	- Linear correlation
	- Simple and multiple linear regression
	- Means
	- One-way ANOVA
	Exercises
6	**Dimension reduction**
	- Principal component analysis
	- Factor analysis
	Exercises
7	**Classification**
	- Logistic regression
	- Discriminant analysis
	Exercises
8	**Clustering**
	- Hierarchical clustering
	- K-means clustering
	Exercises

Software used

IBM SPSS Statistics 29

Suggested bibliography

Field A., *Discovering Statistics Using IBM SPSS Statistics, Sixth Edition*, SAGE, Feb 2024

Available seats

This activity is limited to **110** participants. Registration cannot be conducted once this number has been reached or after the registration period ends.
Please note that you may unsubscribe from ITEC courses only through the yoU@B Diary and **only before the registration deadline**.