

**COURSE TITLE**  
**SOURCES AND METHODS FOR THE ANALYSIS OF INTERNATIONAL DATA**

Study programme  
International Relations

LM-52

LAUREA (MAGISTRALE)

A.Y. 2020-21

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SSD SECS-S/01

CREDITS 6

Year of study (I, II) I

Semester (I, II) I

**EXPECTED LEARNING OUTCOMES**

The objective of this course is to provide the students with the knowledge and understanding of statistical concepts and tools such as measures of location, dispersion, correlation and inequality in such a way to be able to summarize data visually and numerically also reporting and commenting data from main sources as Official statistics agencies and online databases. The students will also learn how to conduct data analysis with Excel.

**Knowledge and understanding**

The student will learn the following:

- 1) calculate and apply measures of location and measures of dispersion for grouped and ungrouped data.
- 2) graphically display data
- 3) evaluate the strength of the relationship between two variables considering different types of variables
- 4) measure and evaluate inequality
- 5) surf the main data sources websites and online databases

**Applying knowledge and understanding**

Summarize data visually and numerically, reporting and commenting data from various sources. Ability to read and interpret a report containing statistical analysis, tables and figures. Search, download and manipulate data from the main data sources websites and online databases

**Further expected learning outcomes:**

- **Making judgements:** Students will be able to draw conclusions from their analysis and to critically comment on others'.
- **Communication skills:** Students will be able to clearly communicate both orally and in writing to a range of audiences: both experts and non-experts.
- **Learning skills:** Students will be able to use and merge information from different sources: books, reports, scientific papers

**CONTENTS**

Basics descriptive statistics tools both univariate and bivariate. Measures of location and their properties (mean, median, mode, etc). Measure of variability and their properties (variance, standard deviation, interquartile range, etc). Measures of skewness, Plots and graphs. The "five values" and the boxplot. Measures of inequality (Gini's index and Lorenz curve, Theil's index). Correlation analysis.

Main Data sources. Official statistics sources and online databases: ISTAT, Eurostat, World Bank, UN, WHO, etc.

Data manipulation and data analysis with Excel.

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**RECOMMENDED READING:**

Any basic statistics book.  
Material prepared by the teacher will be also available.

**ASSESSMENT METHOD**

**a) Learning results to be verified:** Ability to summarize data and commenting main findings.

**b) Assessment method:**

The exam will consist of	Written and oral examination	Written examination	X	Oral examination	
In case of a written exam, questions are*	Multiple choices	Open questions	X	Numerical exercises	X

(\* more answers possible)