



Academic Year 2022-2023
Syllabus
Statistical tools for decision making
CFU 9
Prof. Leonardo Emberti Gialloreti

Course Description

The course provides the basics of descriptive statistics and statistical inference, highlighting the potential applications in political, economic and social sciences.

Teaching Method

Classroom teaching, exercises, discussion of case studies.

Schedule of Topics

Topic 1	Univariate descriptive statistics: types of data; graphical representations; means; variability.
Topic 2	Bivariate descriptive statistics: contingency; correlation; simple linear regression.
Topic 3	Probability: elementary probability rules; random variables; common families of distributions; sampling distributions.
Topic 4	Statistical inference: point estimation; confidence intervals; statistical tests about hypotheses; multiple linear regression.

Textbook and Materials

Textbook

Alan Agresti, Christine Franklin, "Statistics: The Art and Science of Learning From Data"
Pearson; 4th International Edition, ISBN 9781447964186.

Additional required readings

Steven Sloman, Philip Fernbach, "The Knowledge Illusion. Why we never think alone".
Penguin Publishing, 2017.

Leo Tolstoy, "War & Peace". (This novel can be read either in English or in any other language. Only the "Epilogue, Second part" is a compulsory reading; however, the reading of the whole novel is highly recommended).

Assessment

The final (oral) exam consists of theoretical questions and of the (oral) discussion of statistical exercises. The final exam of non-attending students will be covering all the topics of the course (see below).

MIDTERM EXAM

There will be one elective midterm (written) exam, consisting of theoretical questions and exercises. It is highly recommended to attend the midterm exam. The final grade will consider both the results of the midterm and of the final exams. The grade of the midterm exam CANNOT be rejected; it must be accepted. Only the final grade can be rejected. In that case the student must repeat the (oral) final exam about the whole program.

Students who failed or did not attend the midterm exam will be evaluated only through the final oral exam.

Once again: IT IS HIGHLY RECOMMENDED TO ATTEND THE MIDTERM EXAM.

The final exam will be ONLY and EXCLUSIVELY ORAL. The final exam will not have any written part, nor for those who have done the midterm, nor for those who have not done the midterm. Those who have done the midterm will be examined ORALLY only on the second part of the program, the one after the midterm. Those who have NOT passed or did not attend the midterm will have an ORAL exam on the whole program, with a longer oral than the ones who have passed the midterm, and only in the second round. Nevertheless, in both cases the oral exam may also see some short formula written on a piece of paper, WHILE DISCUSSING WITH THE EXAMINER.

Both oral and written exams will be in presence.

If you wish to do the exam as non-attending student (less than 80% of presence and no midterm done) you can choose when to enroll, in the first and/or the second round, on the whole program. If you are an attending student (more than 80% of presence and no midterm done) you can only do the second round, on the whole program.

Office hours

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By appointment.

NOTE: If you are an Erasmus or a non Global Governance student who would like to attend one or more courses in the Global Governance programme, please be aware that, **before enrolling in the course**, you should have read the code of conduct and the procedural rules characterizing our programme. We assume that, if you enroll in the course, **you have read and accepted all Global Governance values and rules**. Notice that attendance is required from the very first lesson and you need to attend at least 80% of the course to be considered an attending student.