



Academic Year 2017-2018

Syllabus

Statistical tools for decision making

CFU 9

Prof. Roberto Rocci

### 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

<b>Topic 1</b>	Univariate descriptive statistics: types of data; graphical representations; means; variability.
<b>Topic 2</b>	Bivariate descriptive statistics: contingency; correlation; simple linear regression.
<b>Topic 3</b>	Probability: elementary probability rules; random variables; common families of distributions; sampling distributions.
<b>Topic 4</b>	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; 3th International Edition, ISBN 9781447964186.

(Textbook sections: 1.1-2, 2.1-5, 3.1-4, 4.1-3, 5.1-4, 6.1-3, 7.1-3, 8.1-4, 9.1-6, 13.1-3)

#### Further reading

Alan Agresti, Barbara Finlay, "Statistical Methods for the Social Sciences", Pearson; 4th Edition.

### Assessment

The final exam is a written test consisting of theoretical questions and exercises to be answered in 90 minutes. It is a closed book exam. Students are not allowed to consult any materials or other sources of information (including notebooks, laptops, dictionaries, mobile phones) during the exam.

#### MIDTERM EXAM

There are two elective midterm (written) exams. Only students that passed the first midterm can access the second one. Students that passed the two midterms must participate to the final exam in the winter session to discuss the results of the last midterm exam. The final grade will be the average of the two grades obtained in the two midterms. The distinction (laude) is obtained if it is collected in both midterms.

### Office hours

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By appointment.

**NOTE:** Since the course is provided for a limited number of students, **Erasmus or non Global Governance students** who would like to attend the course need to contact the Secretariat of Global Governance by e-mail [global.governance@uniroma2.it](mailto:global.governance@uniroma2.it) for registration and inform the Professor of the course. They are required to sign a code of conduct like all Global Governance students, accepting all values and rules. Please read it carefully before enrolling and notice that attendance is required from the very first lesson.