



UNIVERSITÀ  
CATTOLICA  
del Sacro Cuore

## Business Analytics

Prof. Luca Bagnato

[luca.bagnato@unicatt.it](mailto:luca.bagnato@unicatt.it)

### COURSE AIMS

The aim is that of getting the students started in research methods in the fields of quantitative business and marketing. The course is interdisciplinary and will concentrate on data analysis mostly from an applied perspective.

### LEARNING OUTCOMES

At the end of the course the students should be able to choose and apply, using SPSS, the right statistical tool in order to recover information from the different kind of data and answer the business research question.

### COURSE CONTENTS

1. Review of descriptive statistics and inference.
2. Review of Matrix Algebra.
3. The multivariate normal distribution.
4. Simple and multiple linear regression.
5. The chi-squared test of independence.
6. Cluster analysis.
7. Anova.
8. Introduction to SPSS.

### READING LIST

The course will have a rather “applied” nature, but the student may refer to a textbook such as:

- R.M. Warner, Applied Statistics. From Bivariate Through Multivariate Techniques, 2013, Sage.
- Meyers-Gamst-Guarino, Applied Multivariate Research. Design and Interpretation, 2006, Sage.

### TEACHING METHOD

Some theory followed by many hands-on exercises using the software SPSS.

### ASSESSMENT METHOD

At the end of the course students are required to take a written exam using the Personal Computer. The exam consists in solving three empirical exercises. In particular, the students will use SPSS providing a word document containing the answers to the correspondent questions. Depending on the results attained, the written test may be

supplemented by an oral exam to complete the student assessment. The final mark assigned on completion of the course is based on this evaluation procedure.

The exam procedure is the same in each exam session and applies to attending and non-attending students. Additional information will be provided on the lecturers' on-line site.

#### NOTES

The course requires previous experience in statistics at the level of undergraduate courses usually taught in Italian universities.

Information on office hours available on the teacher's personal page at <http://docenti.unicatt.it/>