



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Techniques of Quantitative Data Analysis

2122-2-E4001N083

---

#### Learning objectives

The course aims at offering a systematic introduction to the quantitative analysis of social phenomena, defined as the empirical analysis of phenomena regarding the functioning of human societies, based on the scientific method and the use of mathematical tools.

#### Contents

The course offers a systematic introduction to the quantitative analysis of social phenomena.

#### Detailed program

The course offers a systematic introduction to the following topics: univariate analysis of qualitative and quantitative variables, analysis of two-dimensional contingency tables, simple linear regression, elementary causal analysis.

#### Prerequisites

Enrolling students are requested to possess the basic notions of mathematics, statistics and methodology of the social sciences.

## Teaching methods

Standard lectures plus in-class tutorials.

## Assessment methods

The examination can be carried out in two ways.

Mode 1: Taking a written test consisting of answering twenty questions (eighteen multiple-choice and two open questions) on subjects taken from the teaching materials. Answers to multiple-choice questions will be scored 1.5 if correct, 0 points if incorrect; answers to open-ended questions will be scored 0-3. The test grade will be equal to the sum of the points obtained in all the questions, rounded up (first decimal equal to or greater than 5) or down (first decimal less than 5) to the nearest whole number; rounded sums equal to 31 will be equated to grade 30/30, while those equal to 32 or 33 will be equated to grade 30 cum laude. The time available for the test is 40 minutes.

Mode 2: Writing and discussion of a short paper aimed at answering a research question by applying a quantitative approach and using the Stata and/or R software. The content of the paper must be agreed with the instructor at least two months before the examination date. The final paper must be sent to the instructor at least one month before the examination date. Further information on how to write and discuss the paper will be published on the e-learning page of the course. Please note that the course does not offer systematic training in the use of the Stata and R software; the acquisition of a working knowledge of this software, therefore, is entirely the responsibility of the students and is an integral part of the examination.

## Textbooks and Reading Materials

Corbetta, P., Gasperoni, G. e Pisati M., *Statistica per la ricerca sociale*, il Mulino, Bologna, 2001 (chapters 1-7).

---