UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Quantitative Analysis of Social Phenomena

2122-1-F8802N003

Aims

Knowledge and understanding; Applying knowledge and understanding

Contents

Scientific method. Mathematics, statistics and social research. Social research design. Regression function. Generalized linear regression model. Applications of regression analysis to social research. Statistical inference.

Detailed program

The course provides an advanced introduction to the logic and practice of the quantitative analysis of social phenomena. The first part illustrates the scientific method and its role in social research. The second part presents the basic elements of social research design. The third part focuses on regression analysis, here intended as a tool for describing variation in a given phenomenon of interest as a function of one or more characteristics of the objects of study. The final part is devoted to statistical inference, focusing on both the frequentist and Bayesian approach.

Prerequisites

Basic command of sociological theory and methodology, and fairly good skills in learning, writing and speaking.

Teaching form

Lectures with computer demonstration; in-class and out-of-class individual and group exercises.

Textbook and teaching resource

Pisati M. (2010) «Incompresa. Breve guida a un uso informato della regressione nelle scienze sociali», *Rassegna italiana di sociologia*, vol. 51, n. 1, pp. 33-60.

Pisati M. (2003) *L'analisi dei dati. Tecniche quantitative per le scienze sociali*, Bologna: il Mulino.

Semester

First semester.

Assessment method

The examination can be carried out in two ways.

Mode 1: Taking a written test consisting of answering four open questions on subjects taken from the teaching materials. The time available for the test is 90 minutes.

Mode 2: Writing and discussion of a written 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.

Office hours

By appointment only.