UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Econometrics

2021-2-E4101B017

Learning objectives

Econometrics deals with the quantitative analysis of relevant economic phenomena.

This analysis is based on models which are grounded on economic theory, estimated with appropriate statistical techniques and applied to economic data.

This course provides students with: 1) statistical tools needed to specify, estimate and select models which describe the economic relationships among time series and cross-sectional variables; 2) basic knowledge of the econometric software Stata, which is applied to real and simulated data.

Contents

1. Introduction and definitions

2. The classical linear regression model

3. The generalized linear regression model

4. Diagnostic tests

5. Simultaneous equations models

Detailed program

a. Economics and statistics in econometric modelling

b. The classical linear regression model in brief: the OLS estimator

c. Heteroskedasticity and error autocorrelation: the GLS estimator

d. Diagnostic tests

e. The linear regression model with extra-sample information: the RLS estimator

f. The linear regression model with stochastic regressors: the IV estimator

g. Model specification

h. Simultaneous equations models: identification and estimation

Prerequisites

No formal propedeuticity is required. However, basic knowledge of statistics and microeconomics is necessary.

Teaching methods

The course is articulated in theoretical classes and lab sessions.

In the Covid-19 emergency period, lectures will be carried on by means of pre-recorded videos and live events in videoconference

Assessment methods

The final exam, which is unique, consists of a written part and an oral part.

In the Covid-19 emergency period, oral exams will only be in videoconference. Oral exams will be carried on using the WebEx platform and in the e-learning page of the course a public link for external access to each exam session will be available.

Textbooks and Reading Materials

• A. Gardini, G. Cavaliere, M. Costa, L. Fanelli, P. Paruolo, Econometria, Franco Angeli, 2000

• J. Johnston, Econometrica, Franco Angeli, 3rd edition, 1993

• G. Koop, Logica Statistica dei Dati Economici, Utet, 2001

• M. Manera, Introduzione all’Econometria, Carocci, forthcoming

• F. Peracchi, Econometria, McGraw Hill, 1995

• J.H..Stock, M.W. Watson, Introduzione all’Econometria, Pearson-Prentice Hall, 2005

For specific parts of the programme, additional material will be indicated and made available.

Semester

Second semester.

Teaching language

Italian.