UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Economia Applicata M

2122-2-F8204B011

Learning objectives

The applied economist is more and more required to link economic theory with eco-nometric, mathematical as well as statistical techniques, in order to interpret the behaviour and evolution of key economic variables.

This course concentrates on a set of classical economic relationships, within the fields of microeconomics, macroeconomics, energy and environmental economics, with the aim of illustrating the more relevant implications in terms of contemporary economic theory.

Each relationship is then discussed from the viewpoint of the applied economists, who is required to estimate and test each relation on the basis of the available empirical evidence.

The theoretical issues analyzed in each lecture are then reconsidered in the lab classes, where students are invited to apply the theoretical models to real as well as simulated datasets using the econometric software Stata.

Contents

Costs, learning curve and economies of scale.

Wage determinants and wage discrimination .

The aggregate investment function.

The relationship between sales and advertising.

Rational expectations and macroeconomic models.

Quality of the environment and the level of economic activity.

Models for energy demand.

Detailed program

Costs, learning curves and ecoonomies of scale: the relevant economic theory, definition of learning curve and Cobb-Douiglas cost function, measurement problems, omitted variables and estimation biases.

Wage determinants and wage discrimination: the human capital model, measurement problems, functional forms.

The aggregate investment function: investment and stock of capital, the flexible accelerator model, the neoclassical model of investment, Tobin's Q, adjustment costs, econometric issues.

The relationship between sales and advertising: economic determinants, simultaneity, identification, effects of temporal aggregation.

Rational expectations and macroeconomic models: unemployment rate and Phillips curve, parameter stability and economic policy changes, simultaneous equations systems.

Environmental quality and the level of economic activity: representation and estimation of the Environmental Kuznets Curve with cross-sectional and panel data.

Models for energy demand: demand for electricity, demand for fossil fuels (oil and natural gas).

Prerequisites

No formal propedeuticity is required. However, students are strongly advised to pass the exam of the course of Econometrics and the exam of the course of Analysis of Economic Time Series and Longitudinal Data.

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

E.R. Berndt, The Practice of Econometrics: Classic and Contemporary, Addison-Wesley, 1991.

K. F. Wallis, Topics in Applied Econometrics, Blackwell, 1979.

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

Semester

First semester.

Teaching language

Italian.