



ECONOMETRIA APPLICATA

SECS-P/05 - 9 CFU - 2° Semester

Teaching Staff

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LEARNING OBJECTIVES

- 1. Knowledge and understanding:** The course aims at presenting the principles of econometrics: estimators and their properties; hypothesis testing.
- 2. Applying knowledge and understanding:** The student has to be able to apply the theoretical knowledge acquired in order to analyse the econometric evidence provided in scientific articles, and in order to build a (simple) econometric exercise (multiple regression analysis).
- 3. Making judgements:** The student will be able to understand meaning, role and limits of an econometric model.
- 4. Communication skills:** During the course the student has to improve and develop the knowledge of a technical and economic language; the student has to be able to explain (to both experts and laymen) meaning and characteristics of an econometric model.
- 5. Learning skills:** The student will be able to understand which theoretical concept is appropriate to deal with specific problems in econometric modelling.

COURSE STRUCTURE

Lectures (70%); guided exercises about econometric estimation (using an econometric software) (30%).

DETAILED COURSE CONTENT

(1) Introduction to econometrics and its role in the scientific character of economics; (2) The simple linear regression; (3) Interval estimation and hypothesis testing; (4) Multiple regression and OLS; (5) Regressor endogeneity and IV estimator; (6) GLS estimation; (7) Stationary and non-stationary time series (ARMA and ARIMA models); (8) Dynamic specification; (9) VAR and VECM; (10) Qualitative and Limited

Dependent Variable Models; (11) econometric models with financial data with high frequency.
Applications - building and evaluating an econometric model: (a) Empirical exercises from the textbook and from the Instructor; (b) critical reading of econometric evidence provided in scientific articles; (c) individual construction and validation of an econometric model.

TEXTBOOK INFORMATION

1: C. HILL - W. E. GRIFFITHS - G.C. LIM, *Principles of Econometrics*, (Last edition)

As an alternative: . J.H. Stock - M. W. Watson, *Introduction to Econometrics*, Pearson

2: "A guide for GRETL" (freely downloadable from the web).
