

Financial Econometrics I

ECTS : 3

#### Description du contenu de l'enseignement :

This course is an introduction and/or refresher course in Econometrics that focuses on techniques for estimating regression models, on problems commonly encountered in estimating such models, and on interpreting the estimates. The goal is to provide participants with the basic skills and knowledge necessary to undertake empirical research and to prepare them to the advanced course in Econometrics of Financial Markets. If Gretl will be the econometric software used in the course, it is possible to use R.

Course outline

- How to build an econometric model and how to use it?
- The (simple and multiple) linear regression model
- Inference, hypothesis testing and prediction
- Specification and diagnostic testing (autocorrelation, heteroskedasticity, stochastic regressors and endogeneity, multicollinearity, normality, model specification)
- Selection criteria
- Alternative to OLS (2SLS, ML, GLS, Quantile regression)

#### Compétence à acquérir :

Theoretical and practical knowledge of linear regression models estimation technics. Being able to set up an econometric analysis.

#### Bibliographie, lectures recommandées :

- Adkins L. C., [Using gretl for Principles of Econometrics](#), Version 1.041, August 2018, Free copy;
- Brooks C., Introductory Econometrics for Finance, Second Edition, Cambridge University Press, 2014 ;
- Gelman A., J. Hill and A. Vehtari, 2021, Regression and Other Stories, 1st Edition, Cambridge University Press, 2021;
- Gujarati D., Basic Econometrics, McGraw Hill Higher Education; 5th Revised edition edition, 2009 ;
- Hill C., W. Griffiths and G. Lim, Principles of Econometrics, Wiley, 5th Edition, 2018 ;

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