

- Faculté des sciences économiques
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Efficiency Measurement and Analysis (5ER2031)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en psychologie, orientation psychologie du travail et des organisations	Cours: 2 ph	cont. continu	3
Master en sciences économiques, orientation politique économique	Cours: 2 ph	cont. continu	3

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Printemps

Equipe enseignante:

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Objectifs:

The aim of this course is to provide students with the necessary analytical tools for benchmarking of productive performance and estimating efficiency in production. The emphasis is given to empirical methodologies, particularly the recent developments in econometric models. Students will have the opportunity of applying the models to real data and acquire the skills to initiate their own research in related topics. In addition, a selection of theoretical literature will be used to motivate empirical measures and their application in public policy and regulation.

Contenu:

- Basic elements of production economics and various notions of productive efficiency
- Economic perspectives and the policy relevance of efficiency measurement
- Index numbers and measurement issues
- Data envelopment analysis
- Econometric estimation of production technologies
- Stochastic frontier model and its variations
- Effects of time: dynamics of productivity and efficiency
- Heterogeneity, robustness and error in parametric and non-parametric approaches
- Semi-parametric models and other extensions

Forme de l'évaluation:

Continuous evaluation based on individual projects (70%) and a final 2-hour written exam during the last lecture of the semester (30%).
Retake: 2-hour written exam.

Documentation:

Main textbook:

- An Introduction to Efficiency and Productivity Analysis. Coelli, T. J., Rao, D.S.P., Battese, G. E. and O'Donnell, Ch. J. 2005. 2nd edition, Springer.

Further readings based on:

- The Economics of Production, Beattie, B.R., Taylor, C.R. & Myles, W.J., 2009. Krieger Publishing Company.
- A Primer on Efficiency Measurement for Utilities and Transport Regulators, Estache, A. et al., 2003. World Bank Publications, available for download at: www.worldbank.org/reference
- The Measurement of Productive Efficiency and Productivity Growth. Fried, H. O., Lovell, C. A. Knox and Schmidt, S. S. (editors). 2008. Oxford University Press, Oxford.
- Journal articles and extracts made available during the term.

The course requires work with Limdep, Stata or similar software.

Forme de l'enseignement:

2-hour weekly lectures.