- Faculté des sciences économiques
- www.unine.ch/seco

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:

Prof. Mehdi Farsi
Institute of Economic Research
Pierre-à-Mazel 7
CH-2000 Neuchâtel
tel: +41 32 718 1450
Email: mehdi.farsi@unine.ch

Objectifs:

The aim of this course is to provide students with the necessary analytical tools and modeling skills used in benchmarking various decision making units. The focus is on the assessment of the productive performance and the empirical methodologies derived from production economics including Stochastic Frontier models and Data Envelopment Analysis. Benchmarking applications in public policy and regulation as well as business management will be motivated through a selection of examples from the literature. The course combines lectures with an individual benchmarking project. While the lectures aim at training students for a sound and scientific usage of benchmarking techniques, the individual project provides a hands-on benchmarking experience with real data.

Contenu:

- Basic elements of production economics and various notions of productive efficiency
- Economic perspectives and the relevance of benchmarking
- Index numbers and simple indicators
- Data envelopment analysis
- Econometric estimation of production technologies
- Stochastic frontier model and its variations
- 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 during the semester (70%) and a final 90-minute written exam during the last lecture of the semester (30%). The individual projects will be conducted in two steps with the first part accounting for about 20% of the final grade.
Re-examination session (August-September): 2-hour written exam (100%).

Documentation:

- 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.
- 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.
- Data Envelopment Analysis: Modeling Operational Processes and Measuring Productivity, Cook, W. & Zhu, J., 2008.
- The Economics of Production, Beattie, B.R., Taylor, C.R. & Myles, W.J., 2009. Krieger.
- Journal articles and extracts made available during the term.

Forme de l'enseignement:

Lecture: 2 hours per week
Office hours: on request by e-mail